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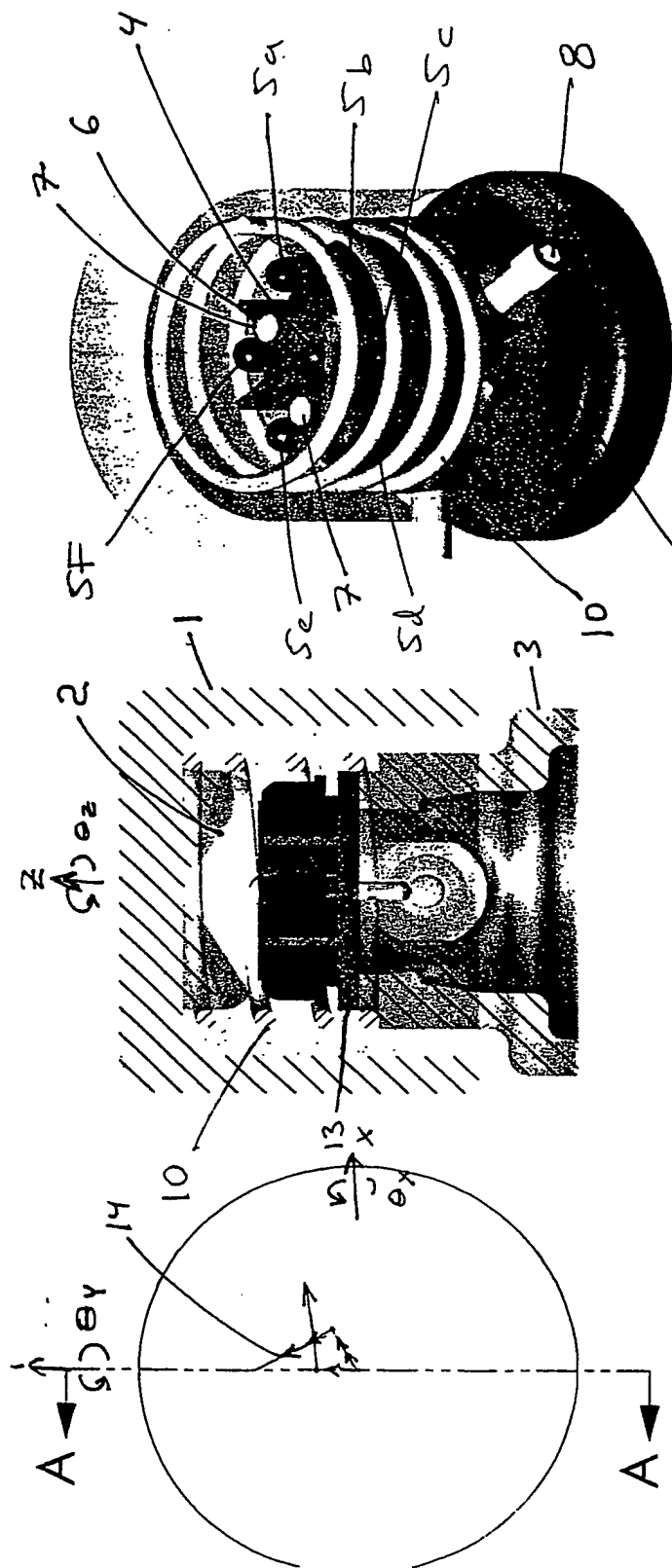
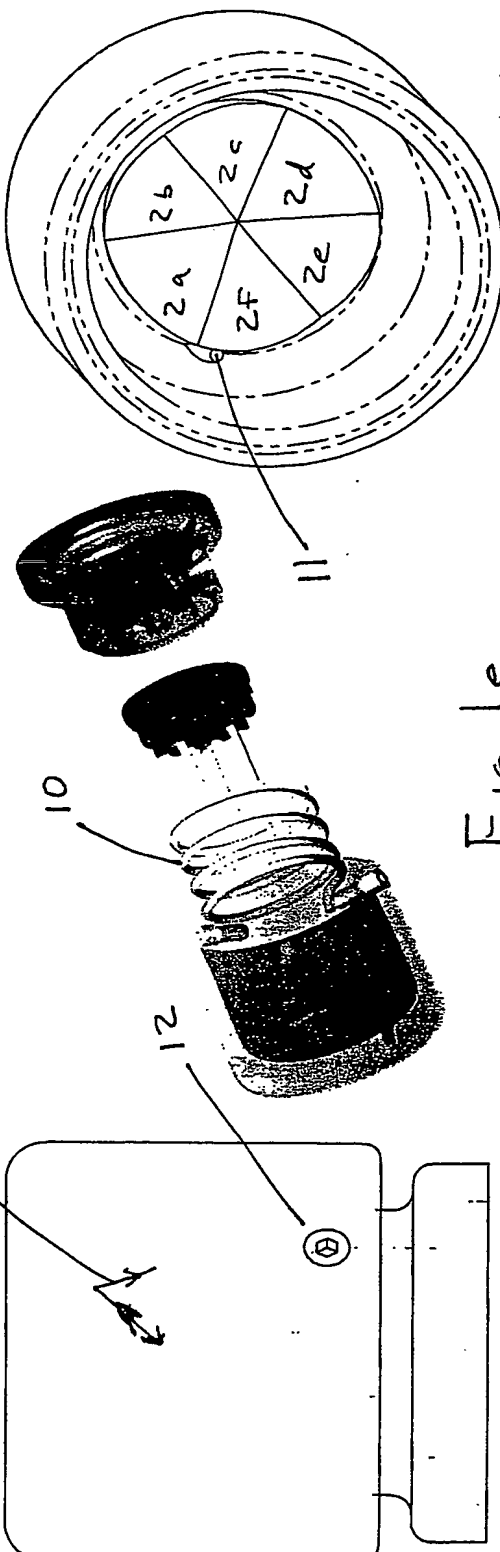


Fig 1b

Fig 1c

Fig 1d



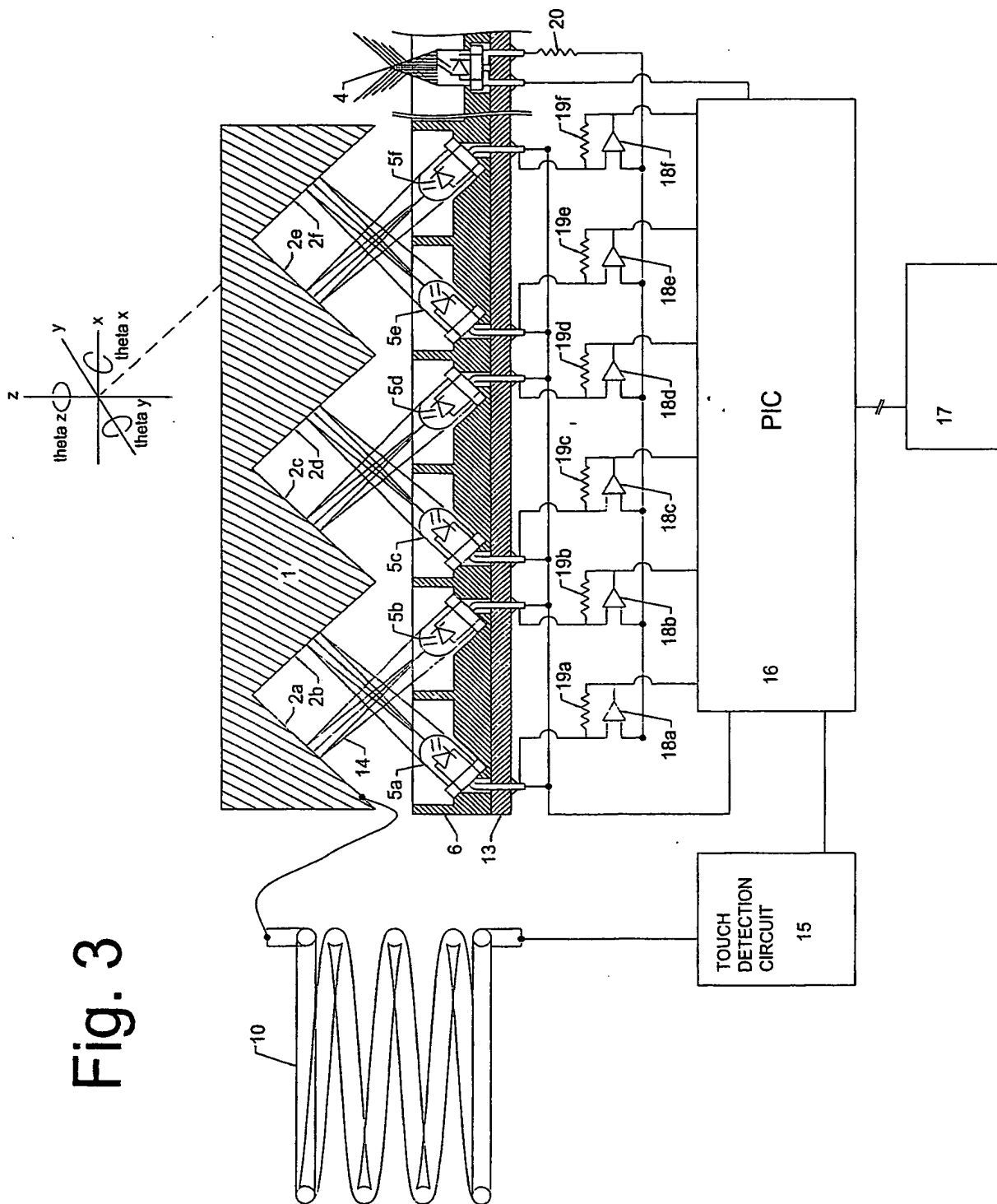
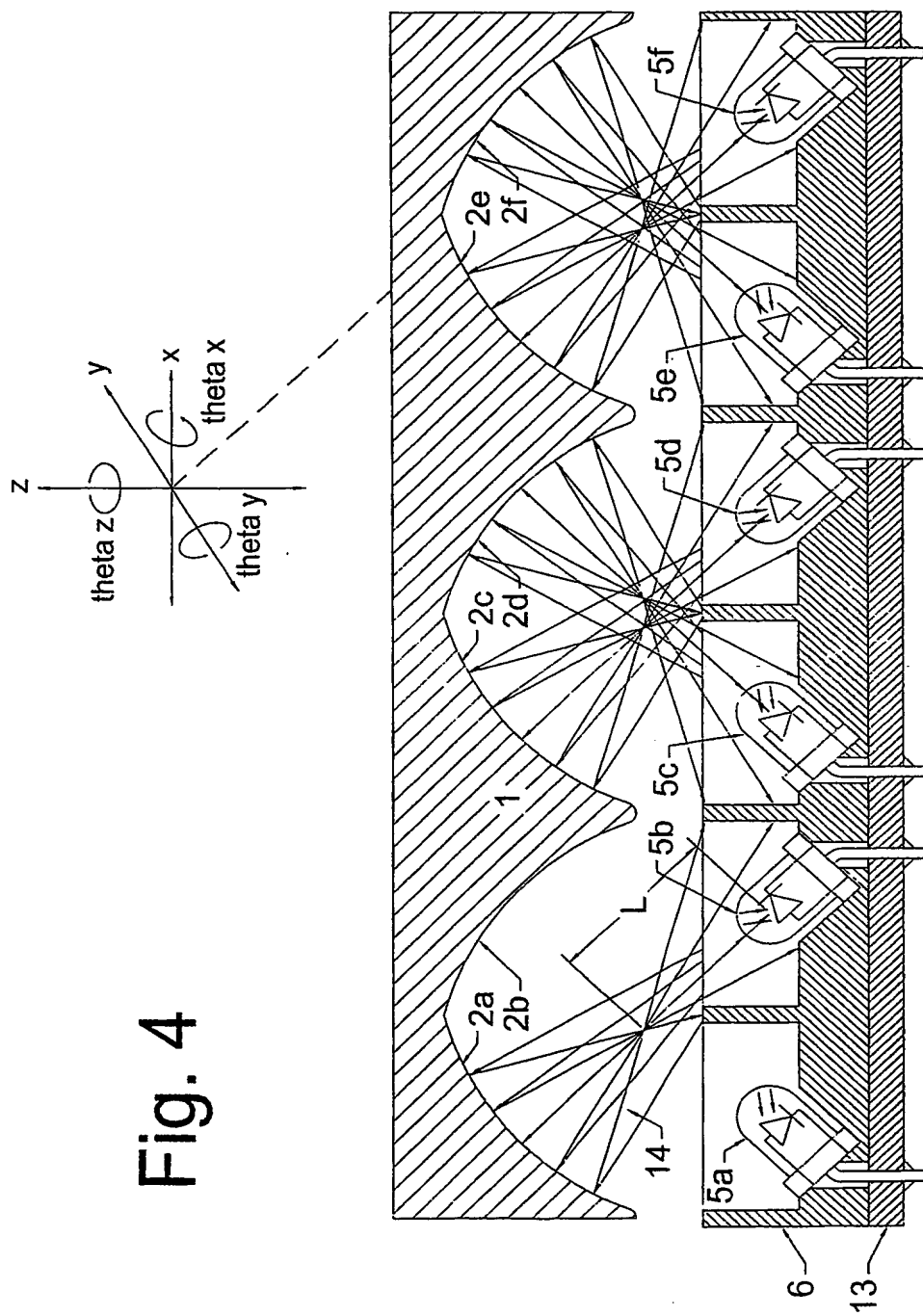
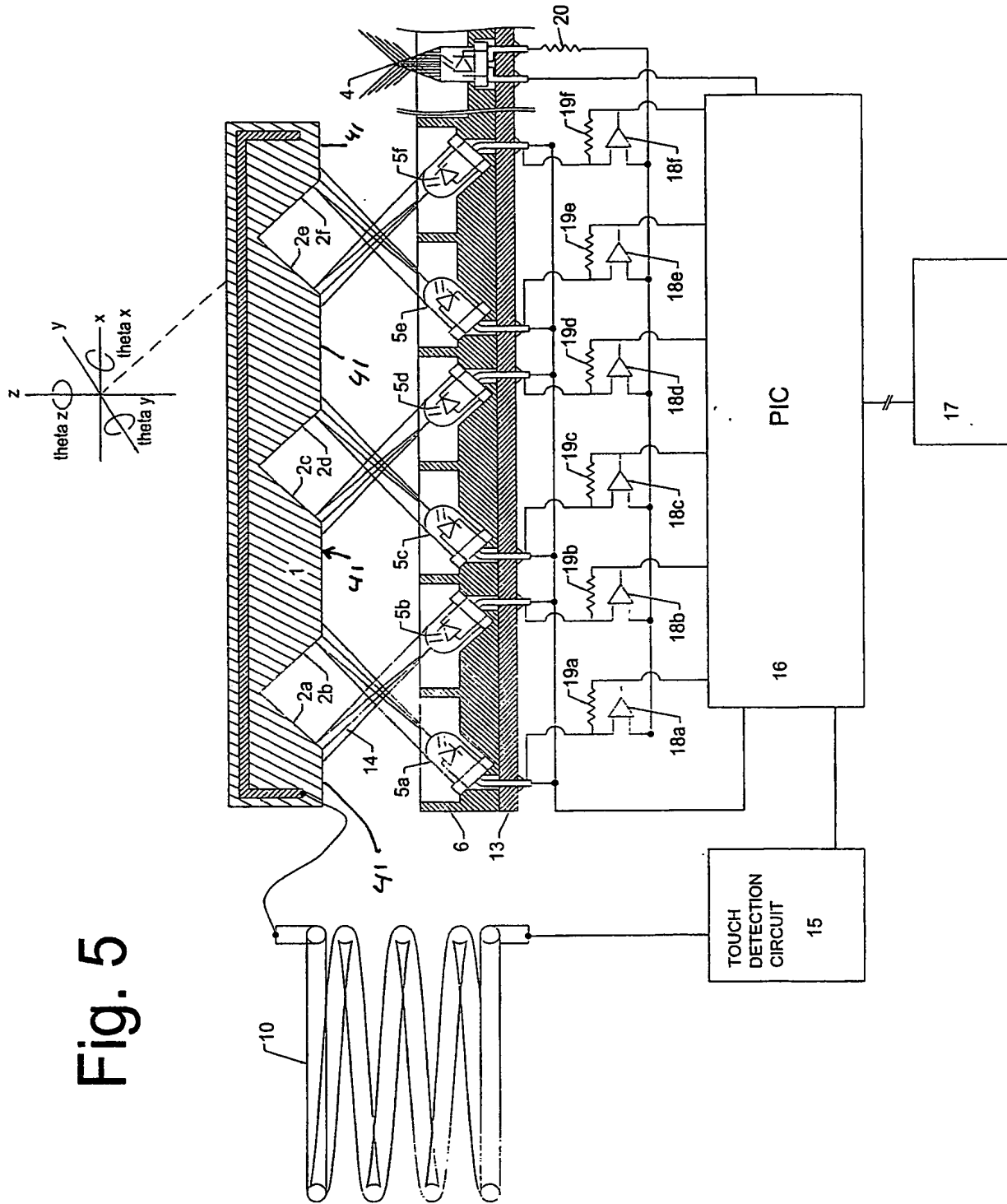
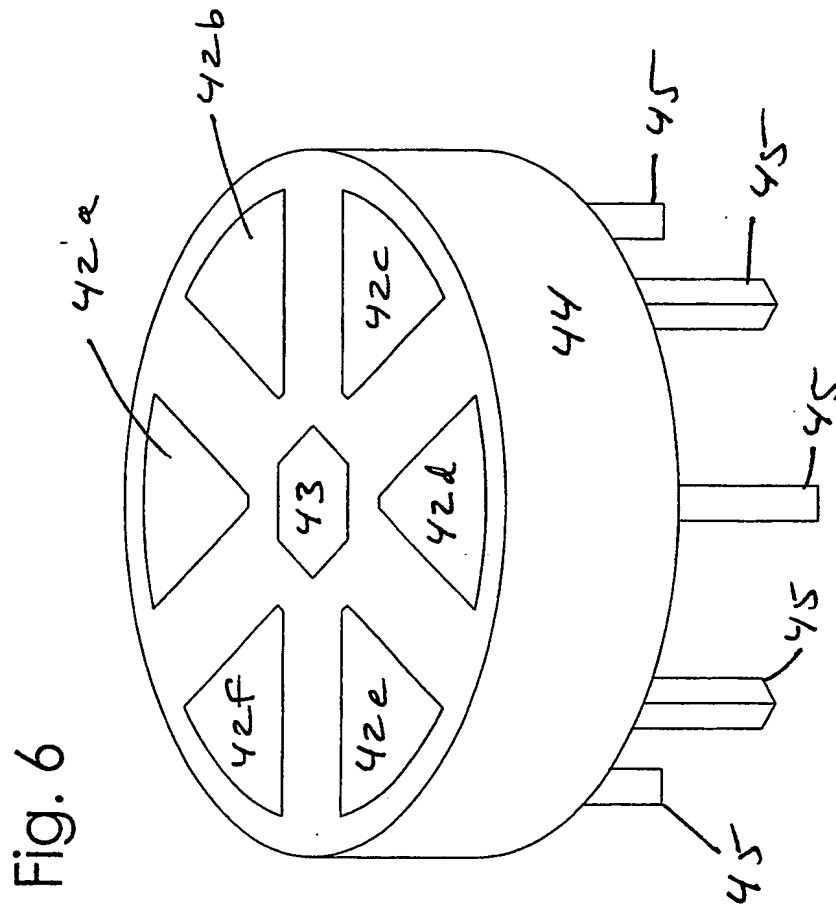
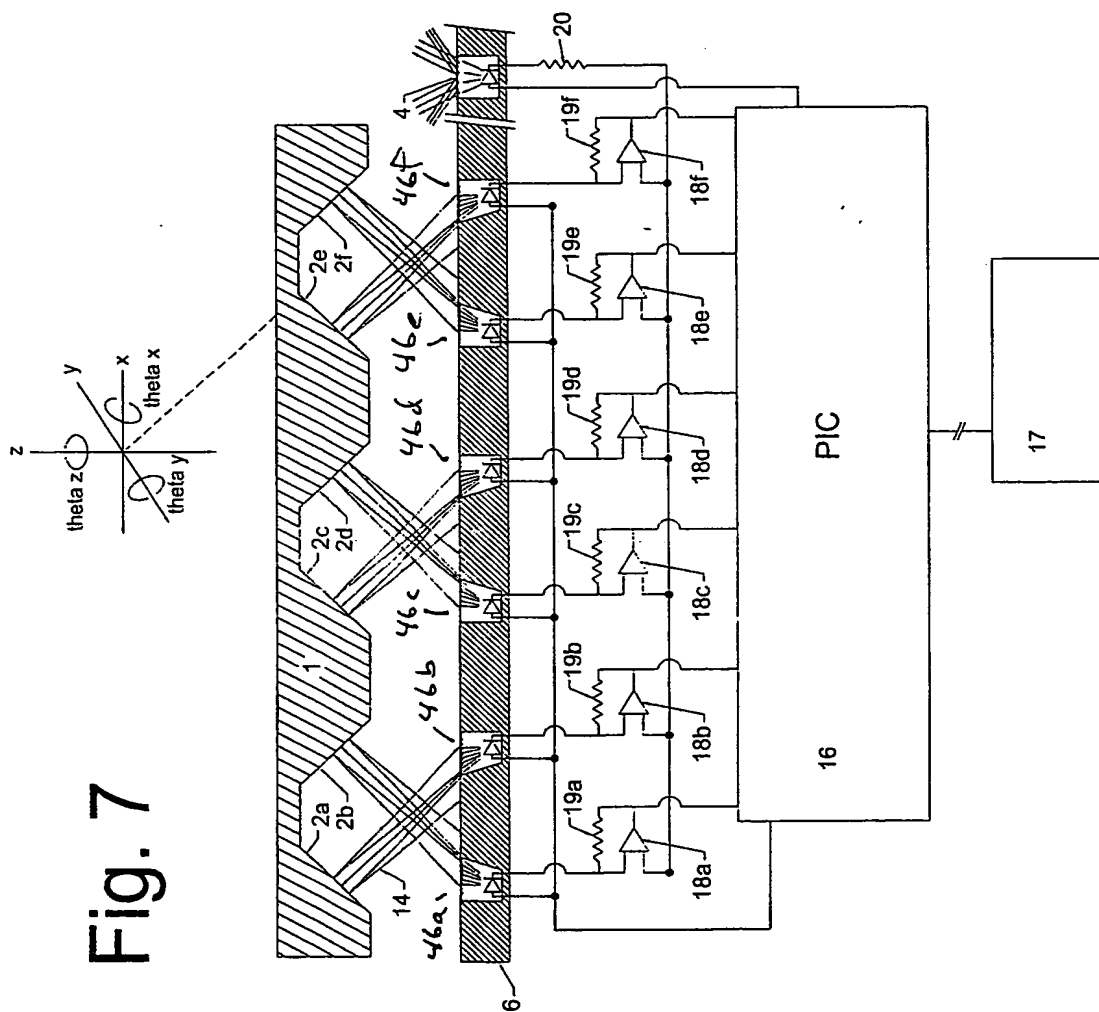


Fig. 4

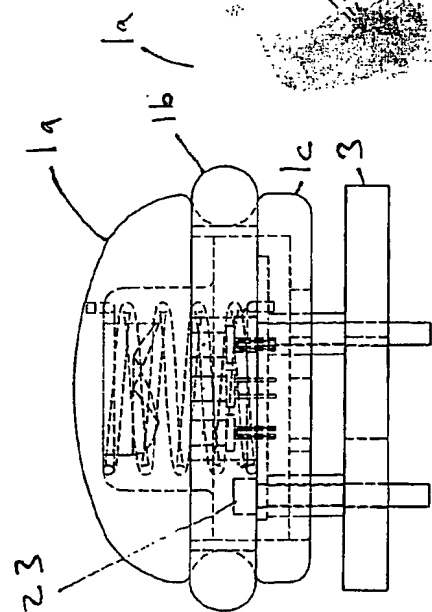
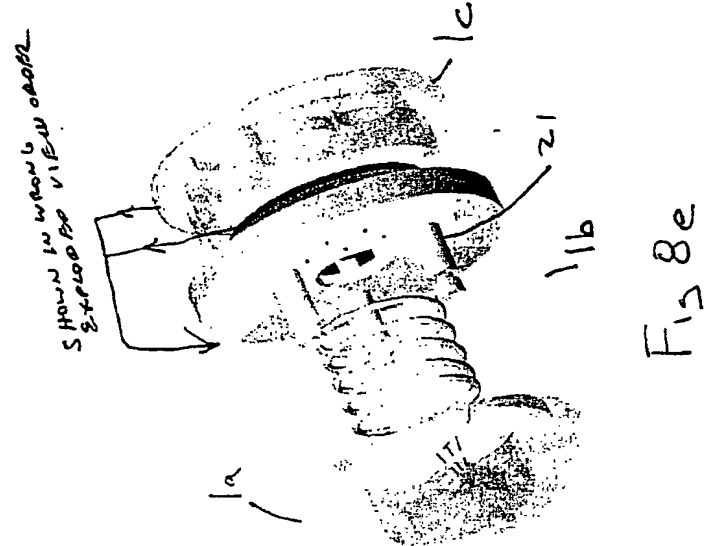
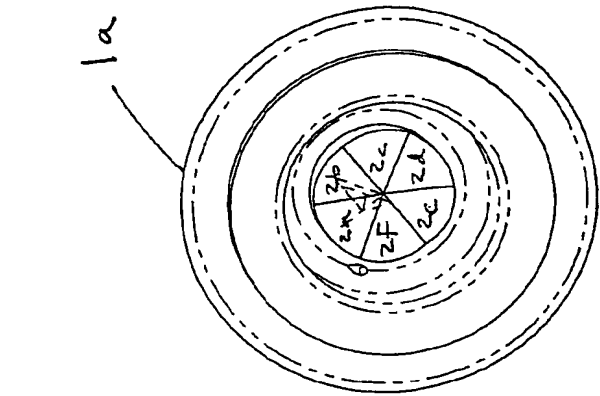
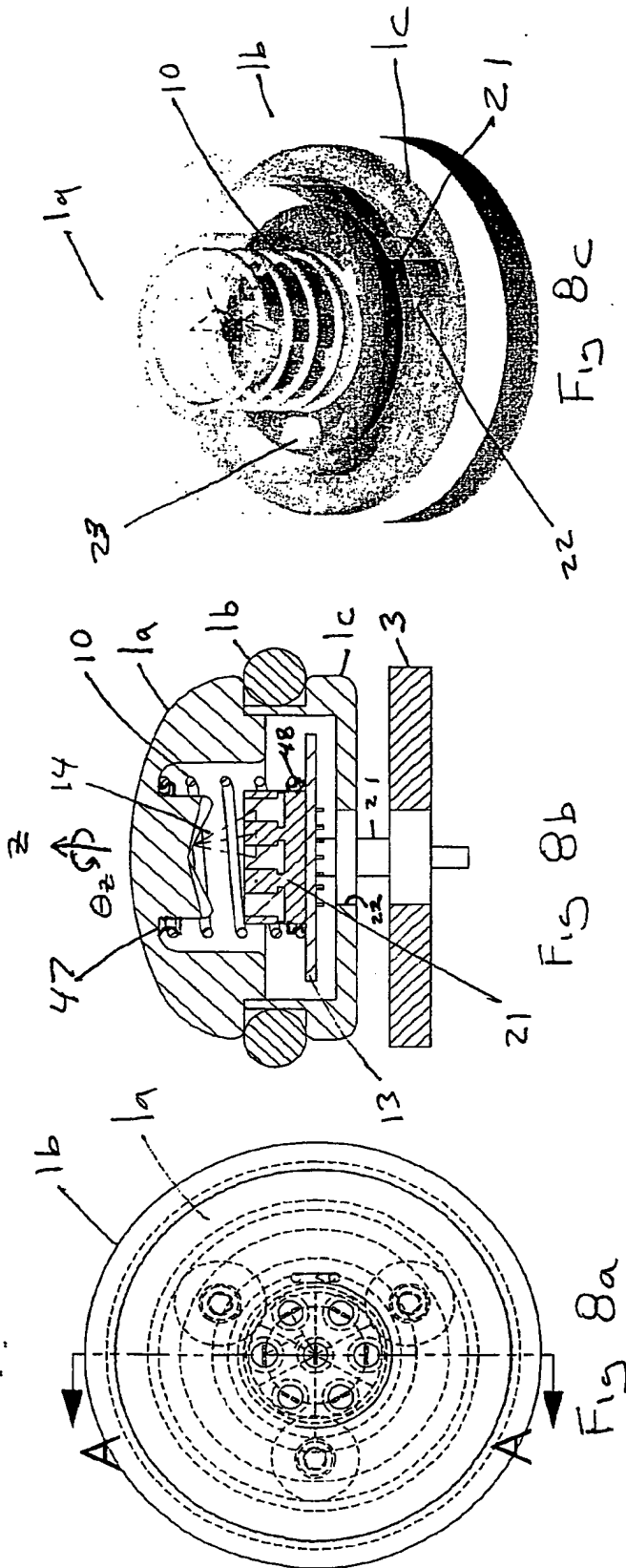




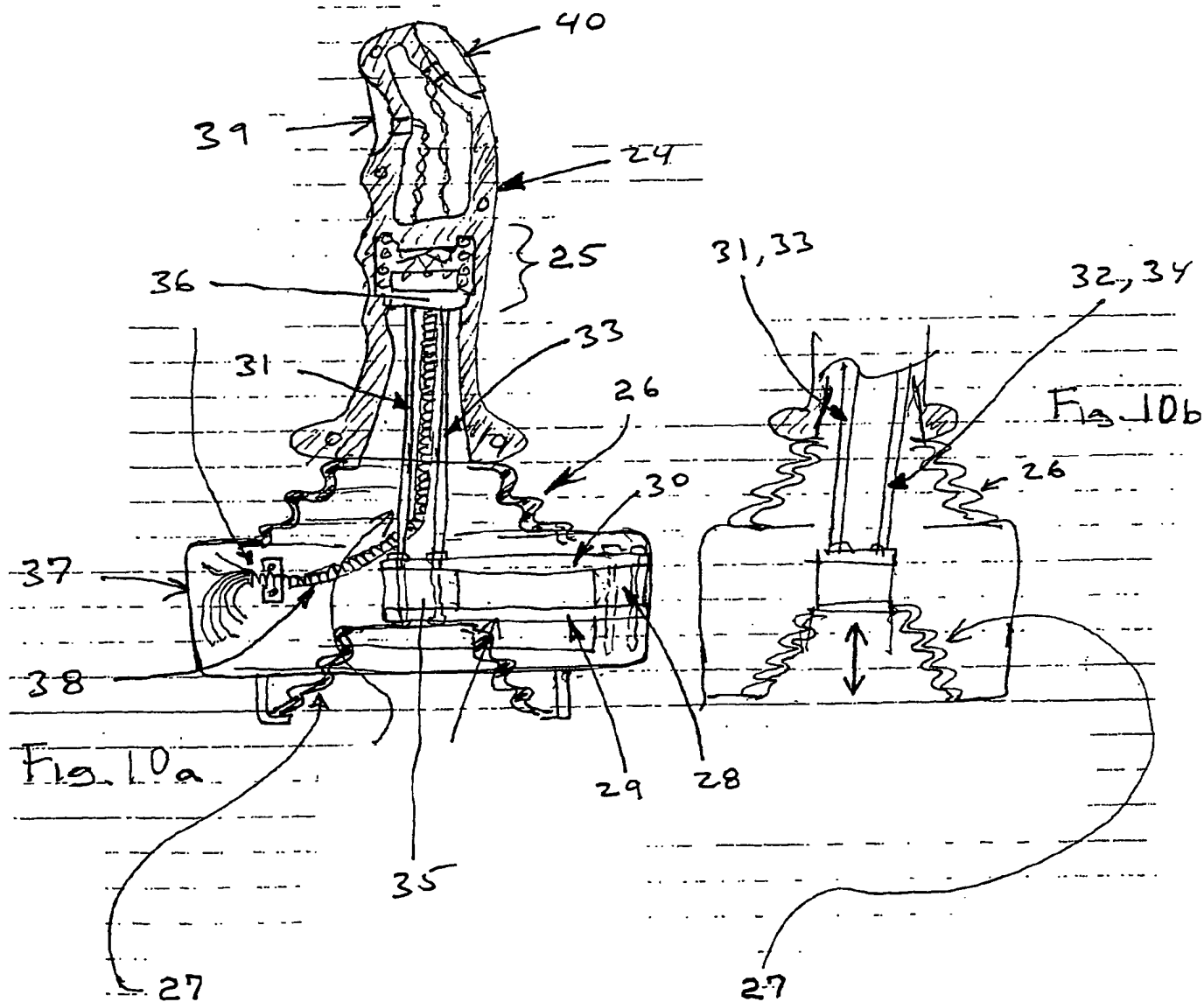
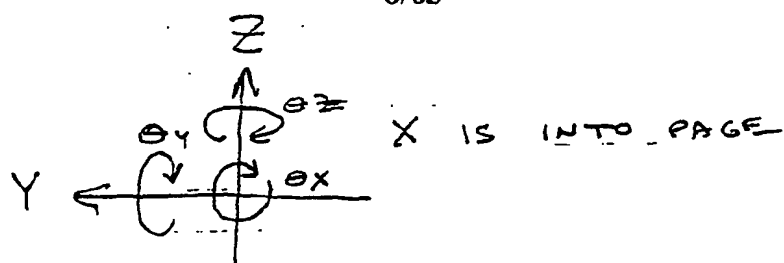




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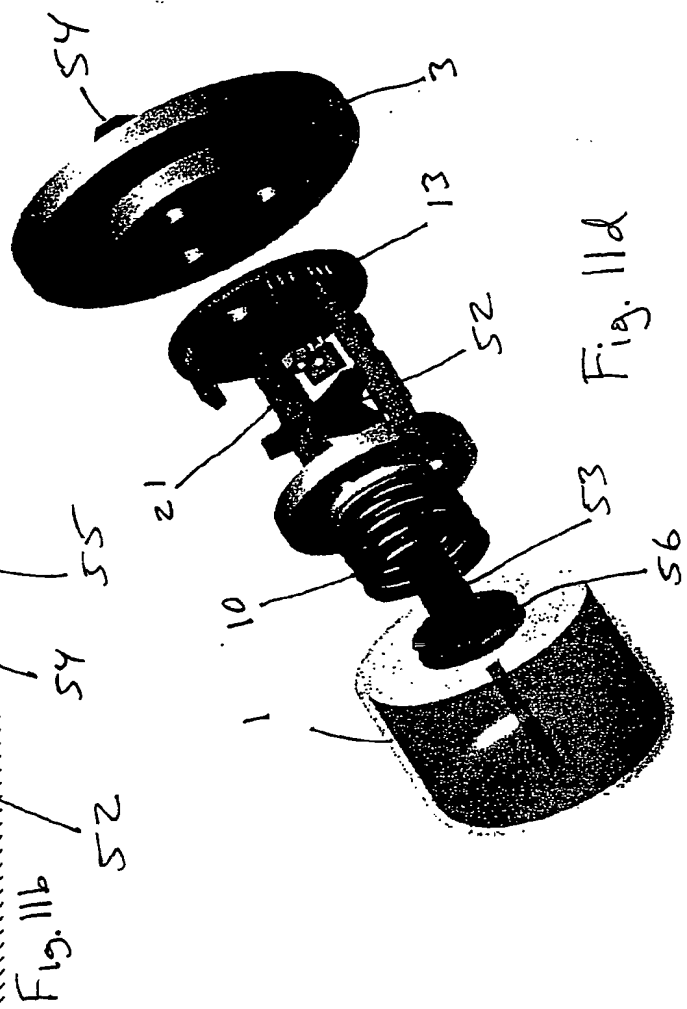
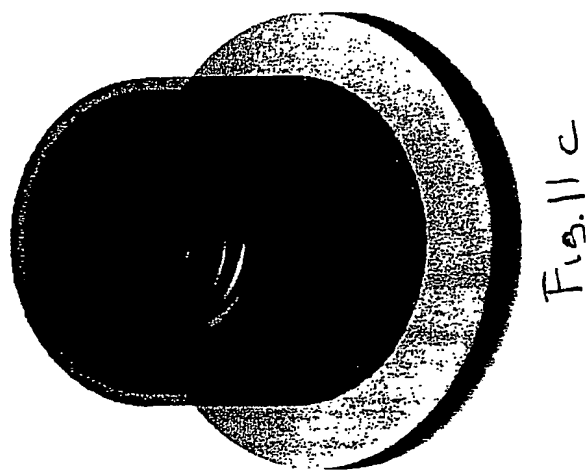
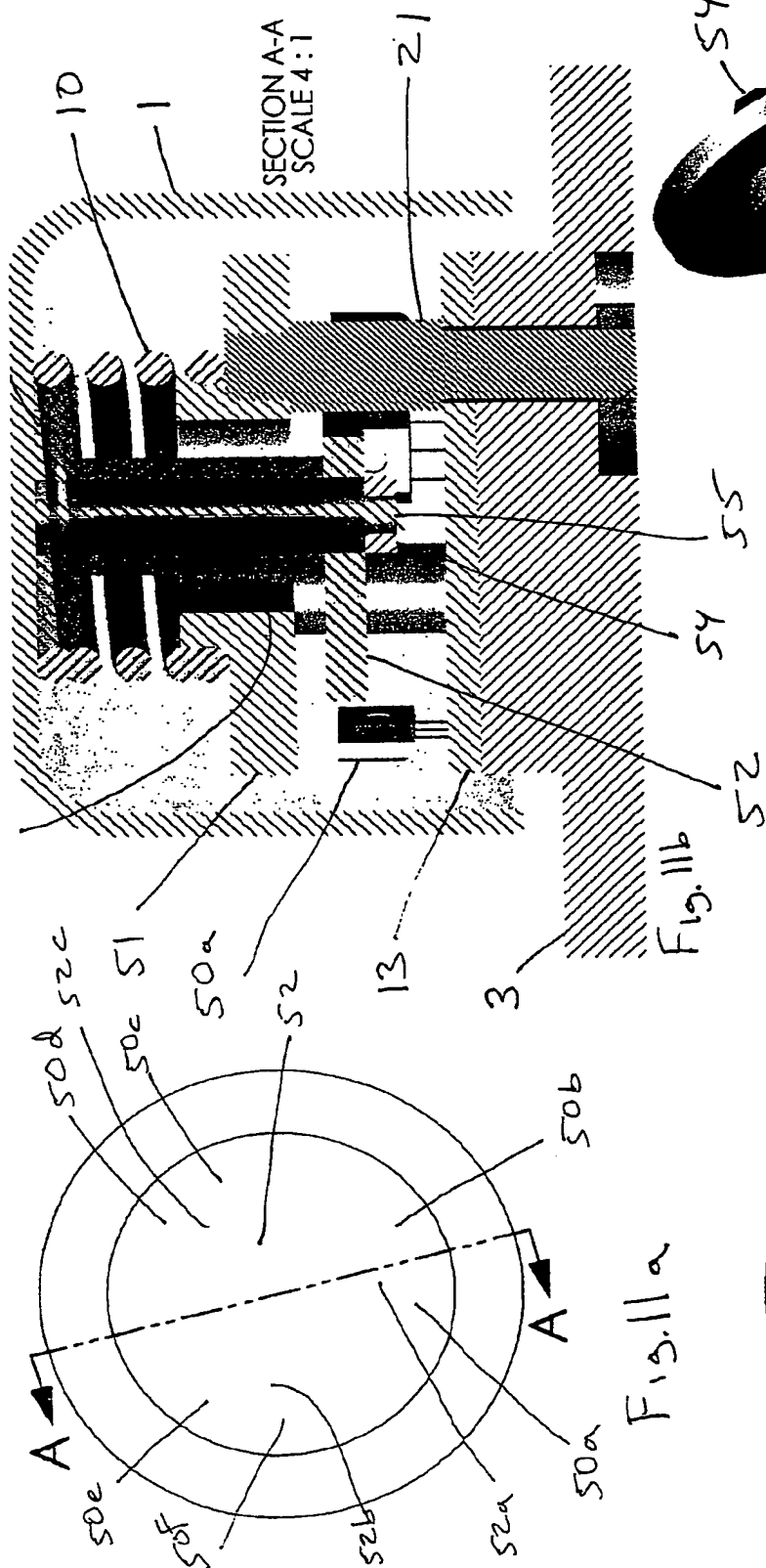


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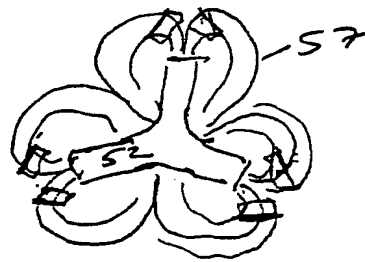


Fig 12

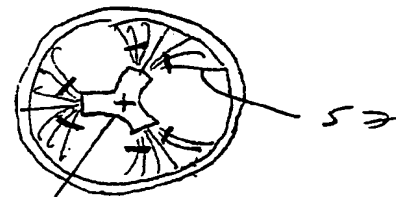
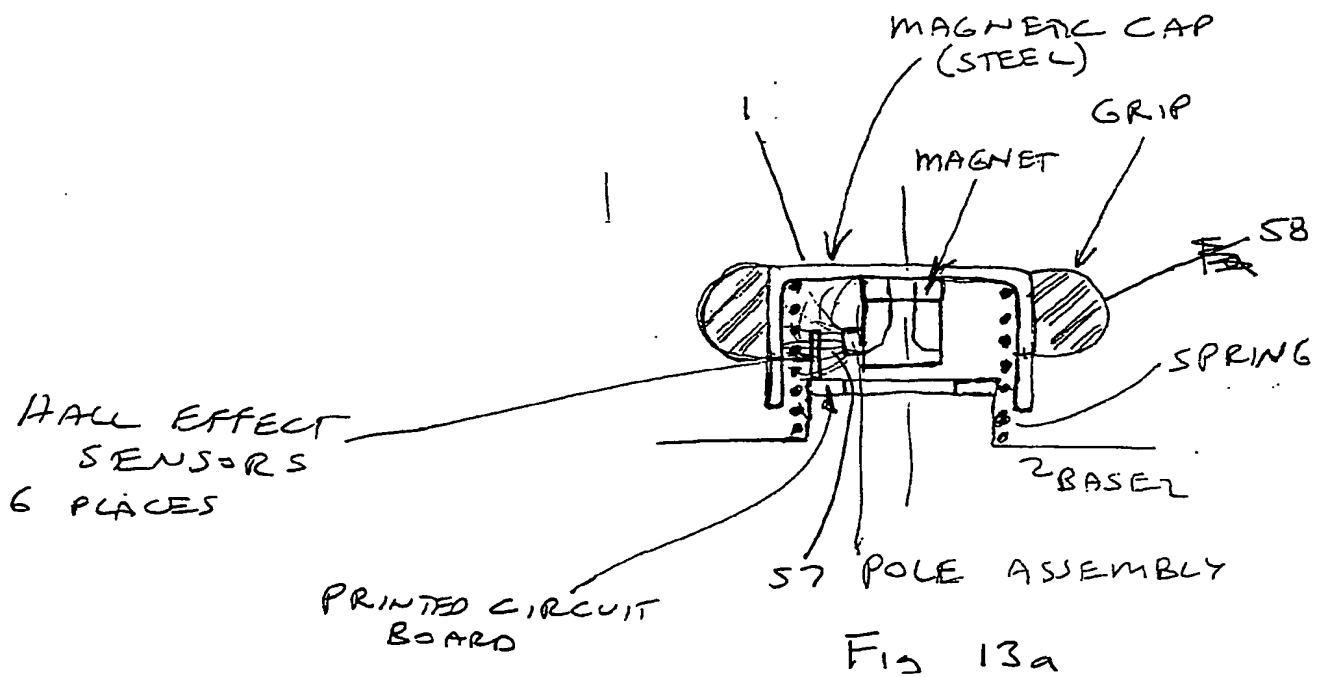
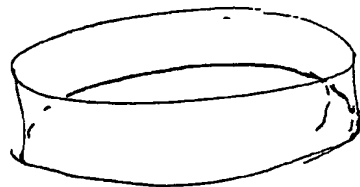


Fig 13



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PCT/US03/11614

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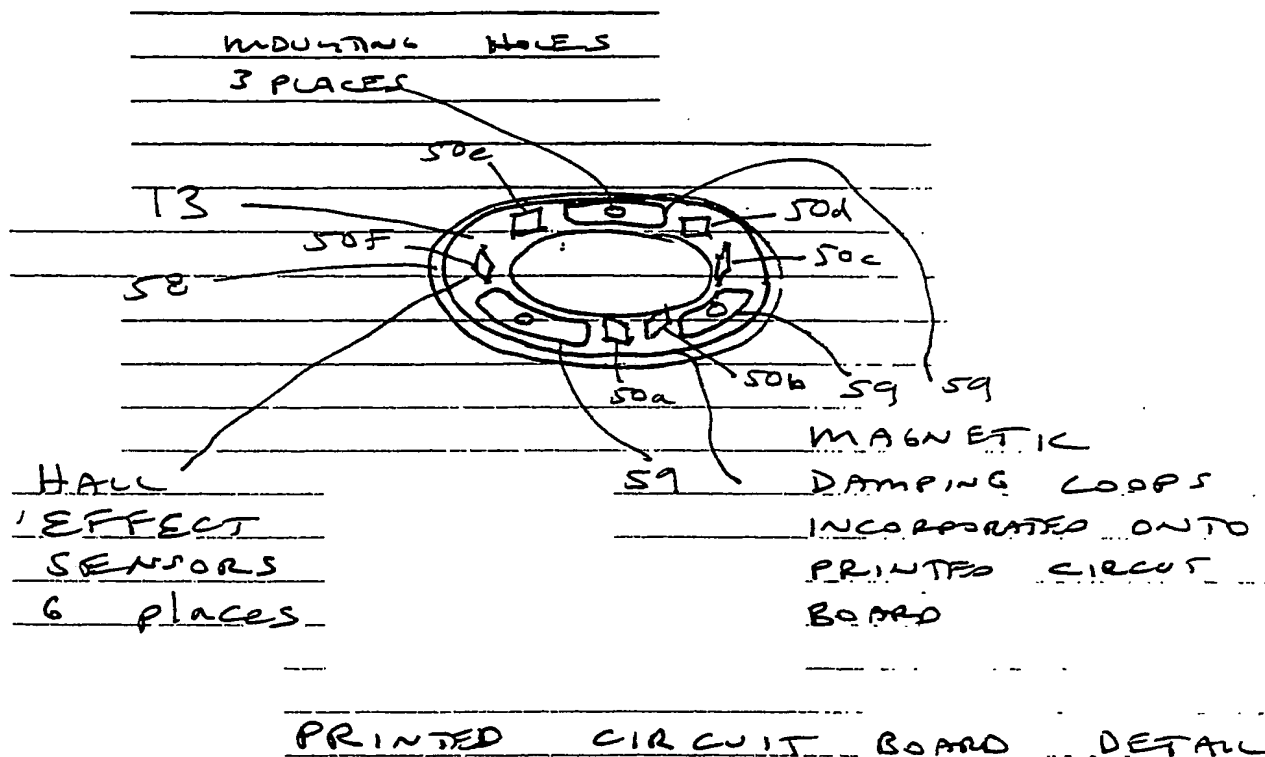


FIG. 14

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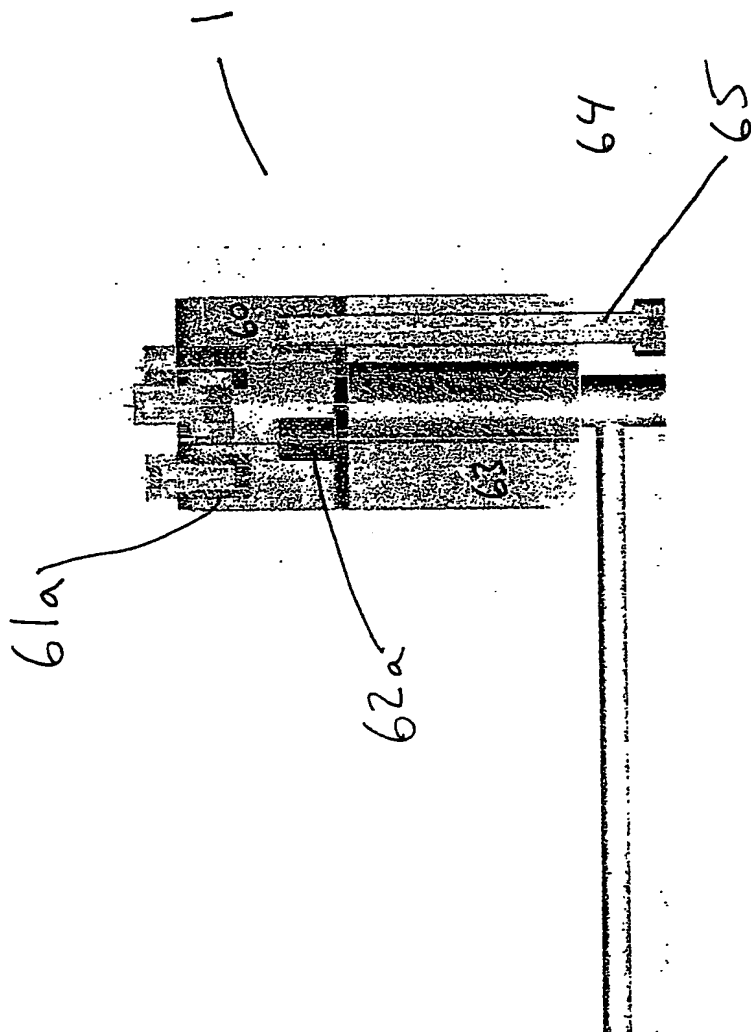


Fig 15a

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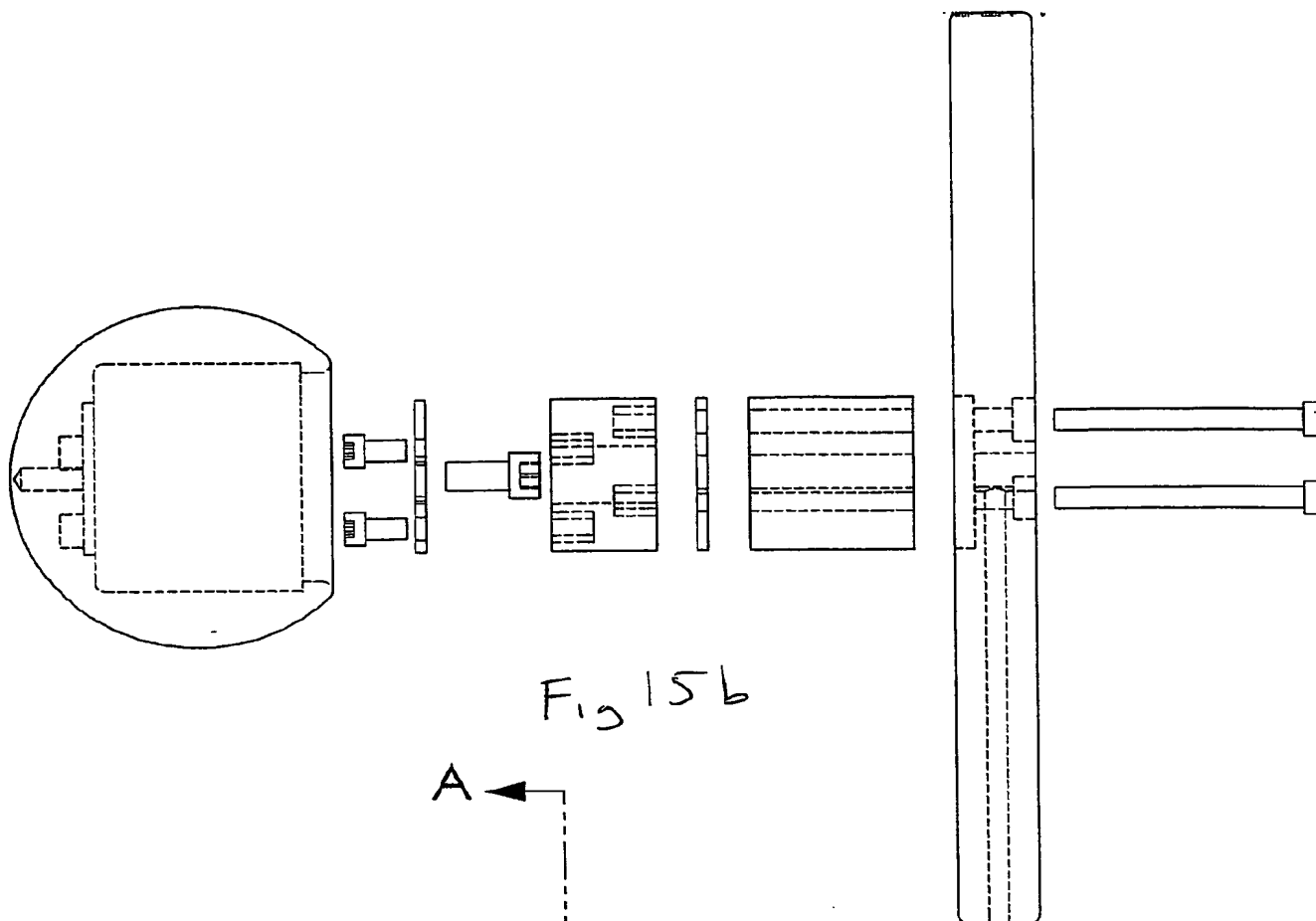


Fig. 15b

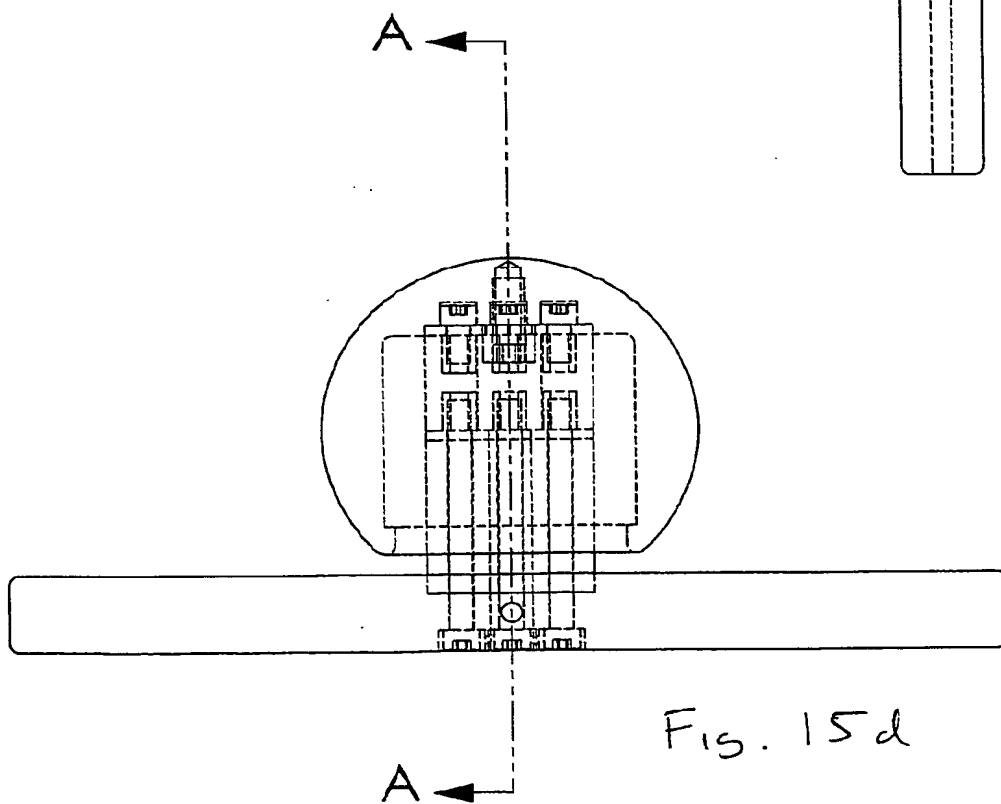


Fig. 15d

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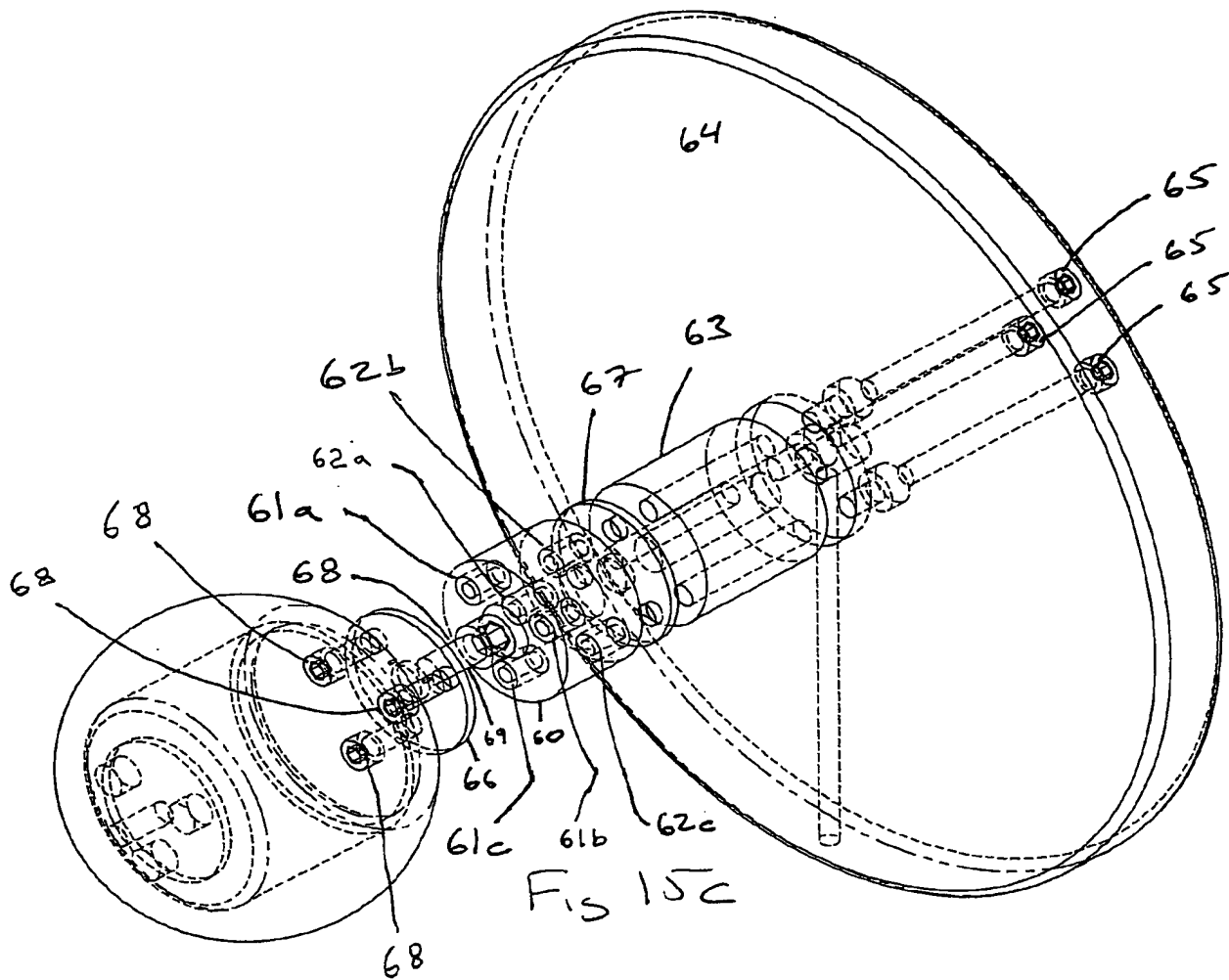
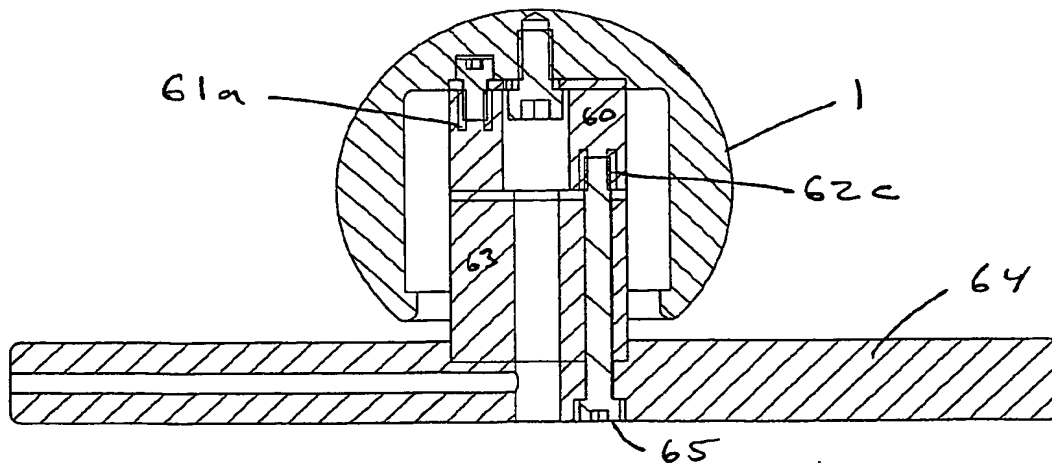


Fig 15c



SECTION A-A

Fig 15e

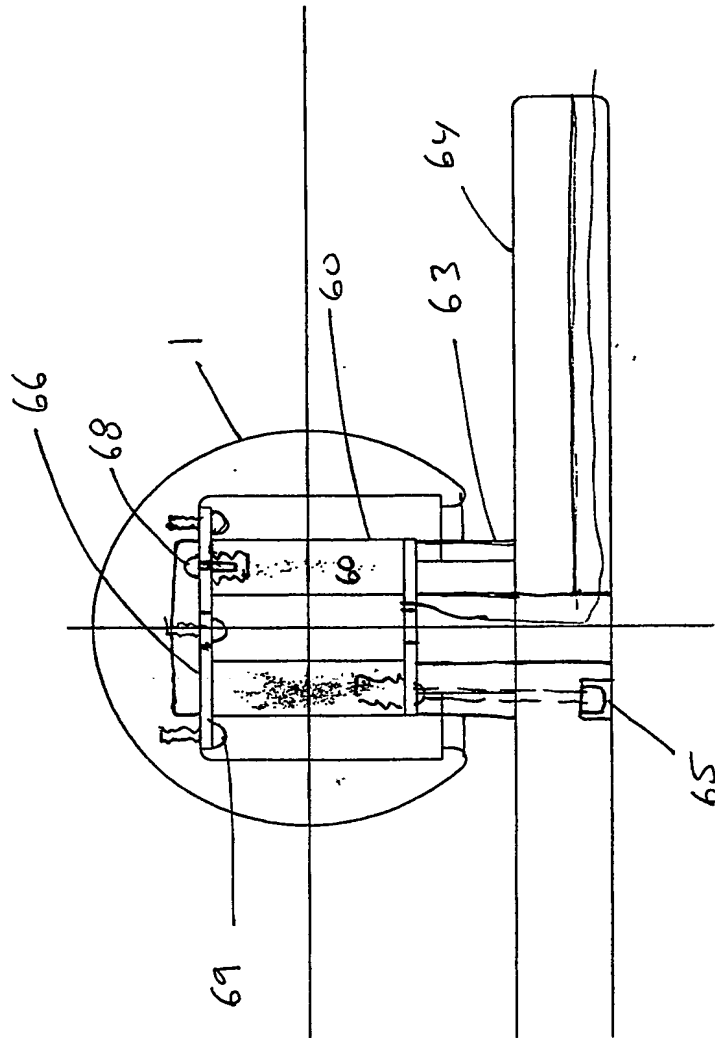


Fig 16

CIRCUIT DIAGRAM  
FOR RUBBER PLUG

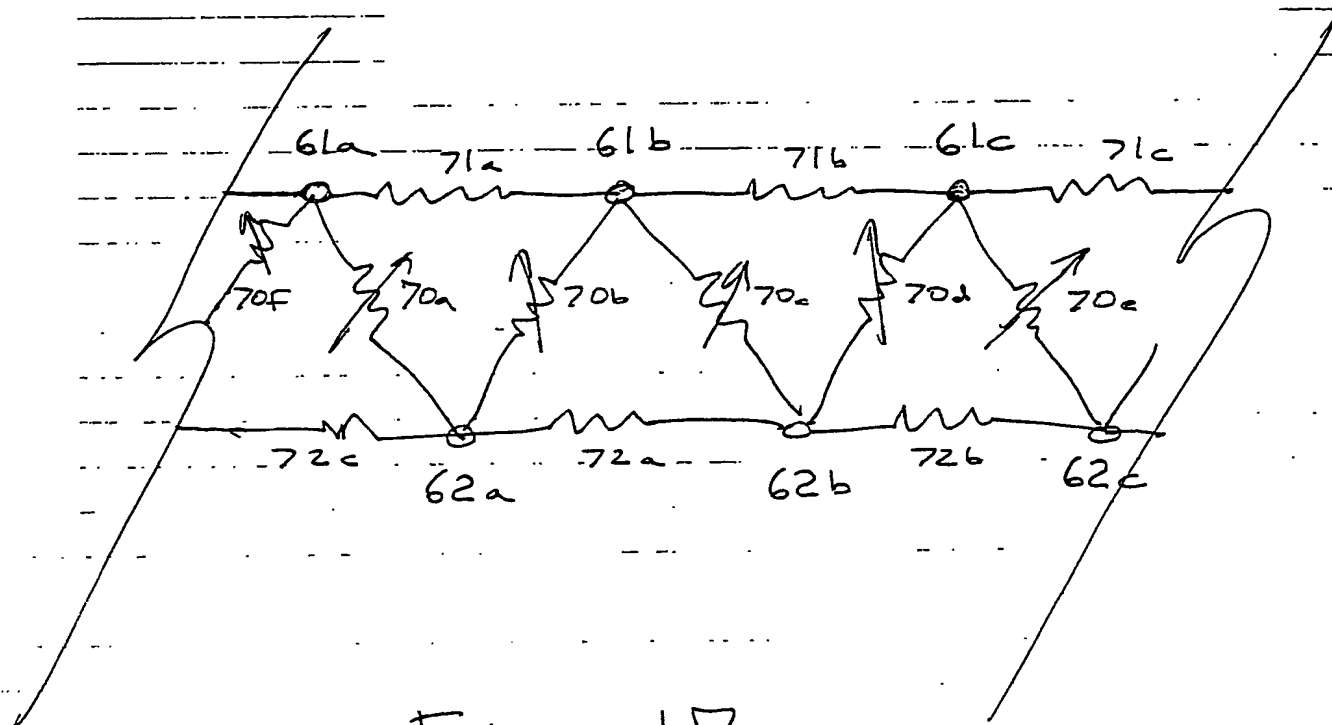


Fig 17



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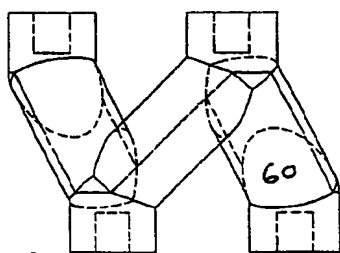


Fig 18a

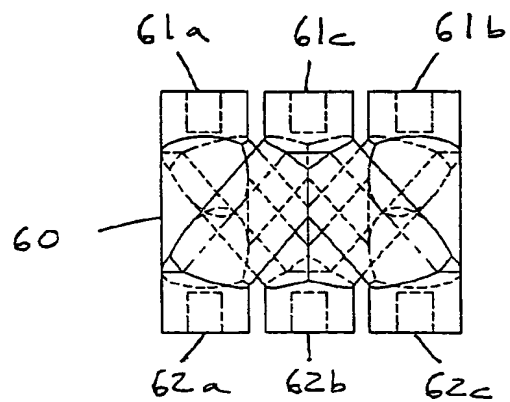


Fig 18b

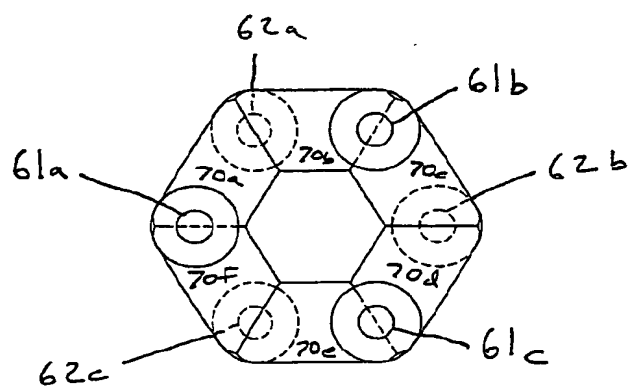


Fig. 18c

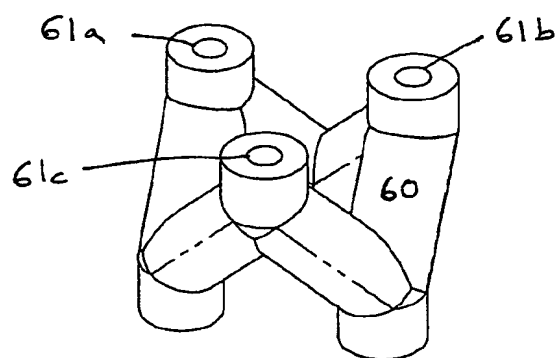


Fig. 18d

~~175~~  
CIRCUIT DIAGRAM  
FOR "SPIDER"

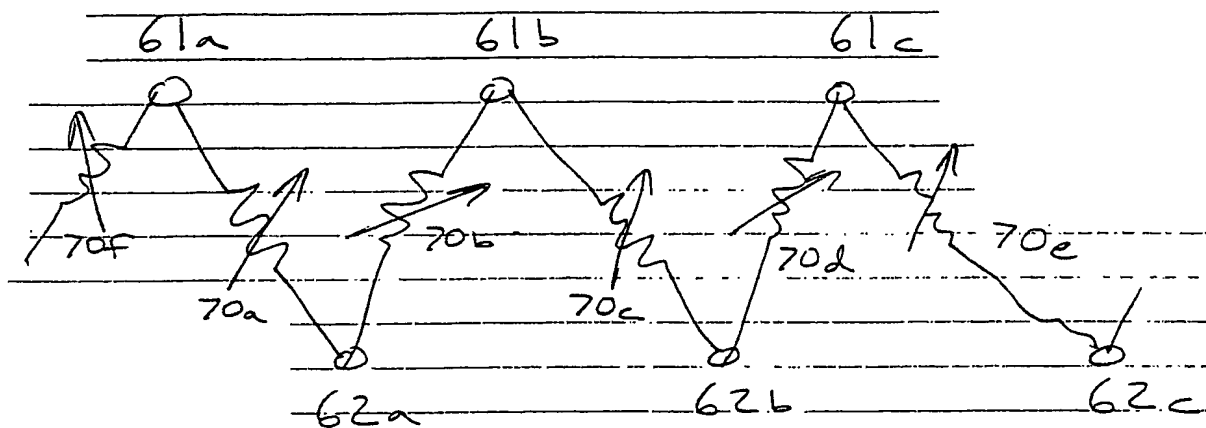
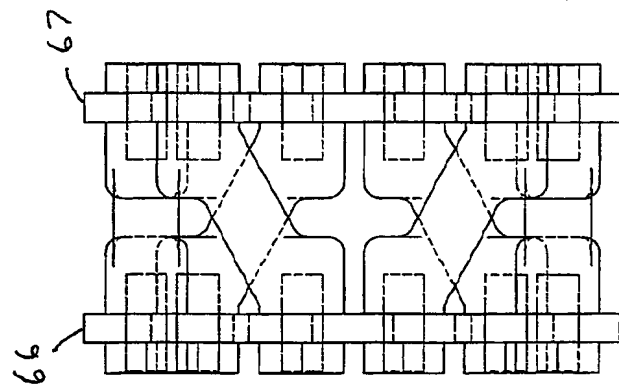
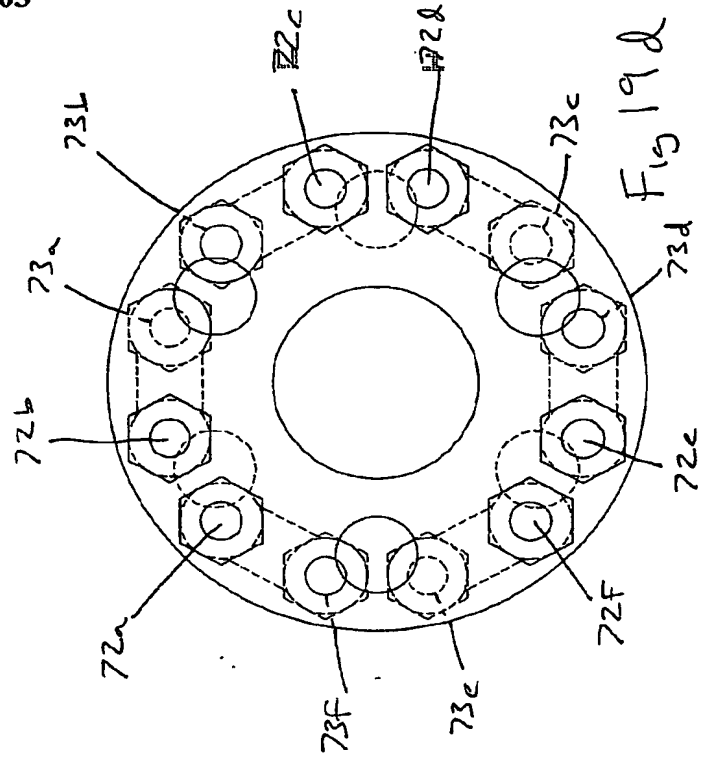
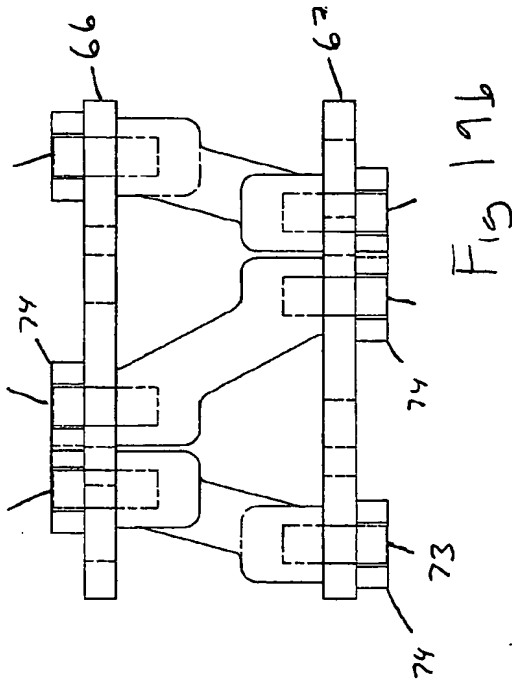
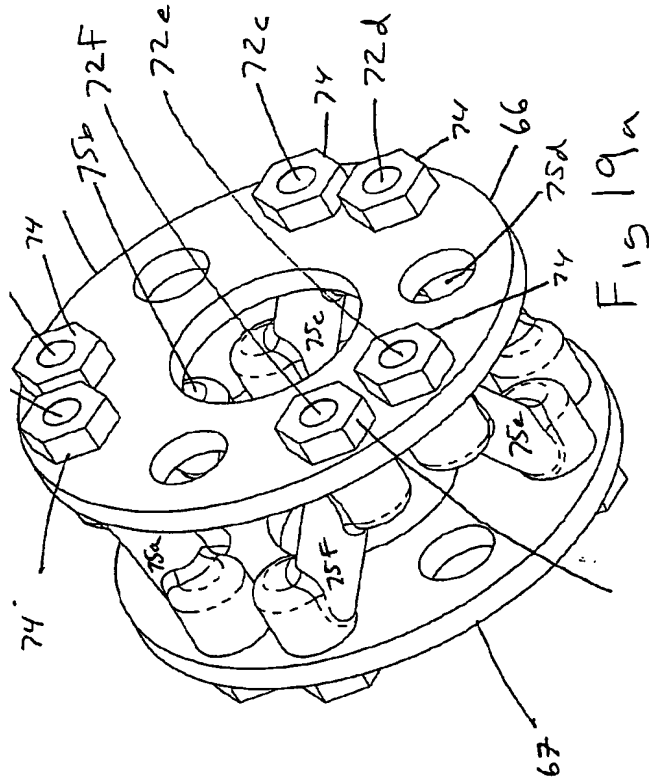


Fig 18e

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CIRCUIT DIAGRAM  
FOR INDEPENDANT CIRCUIT  
ELEMENTS

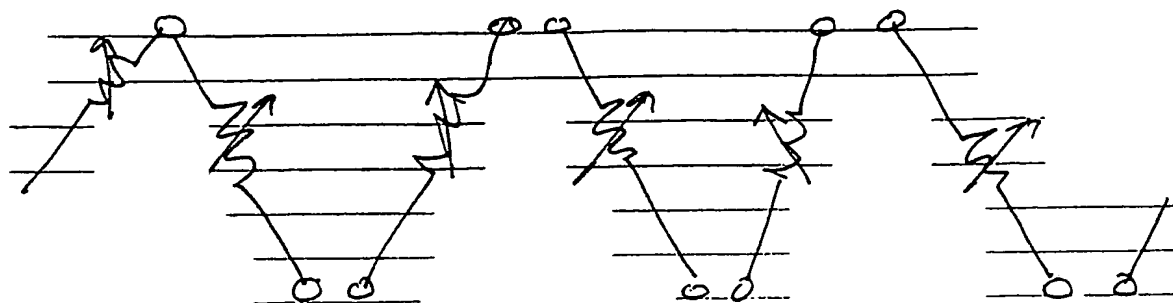
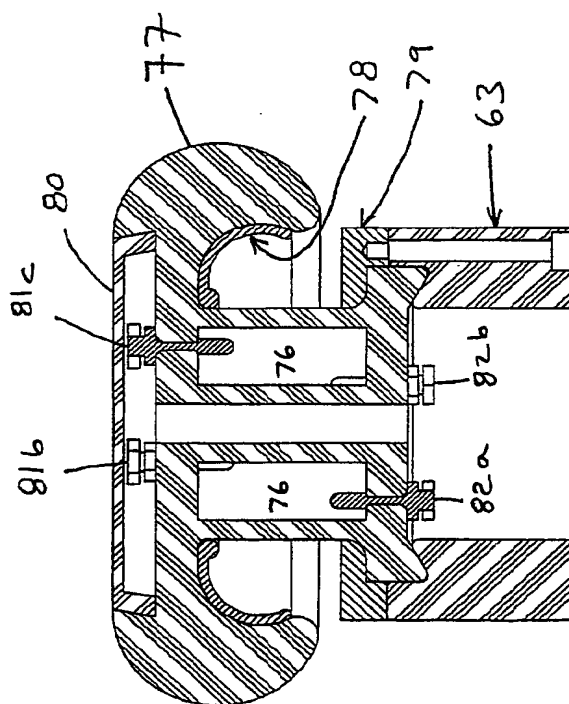
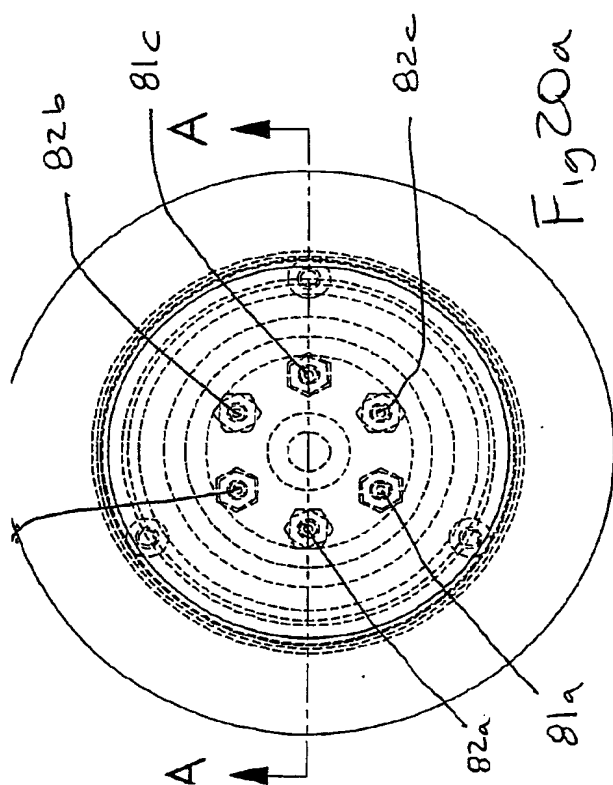


Fig 19e.

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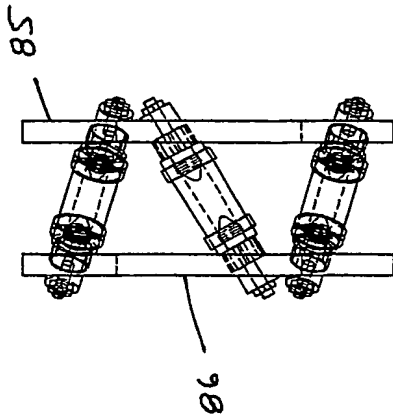


Fig 21e

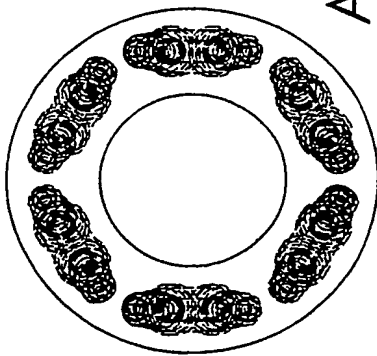


Fig 21a

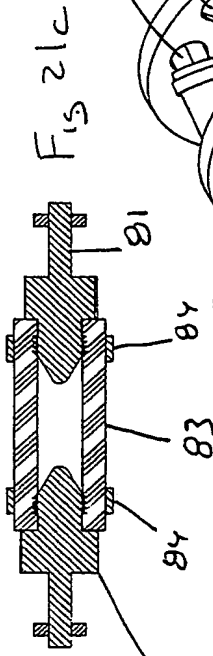
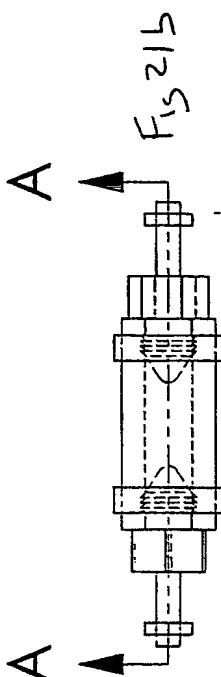


Fig 21c

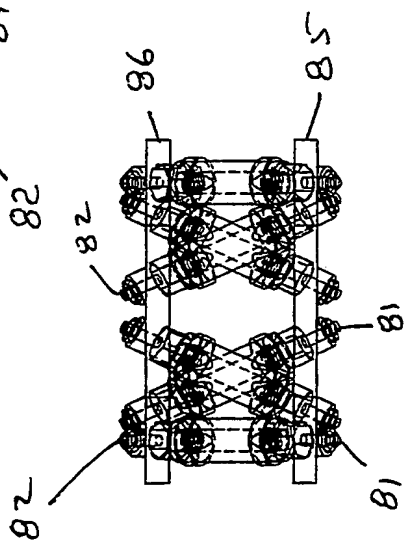


Fig 21d

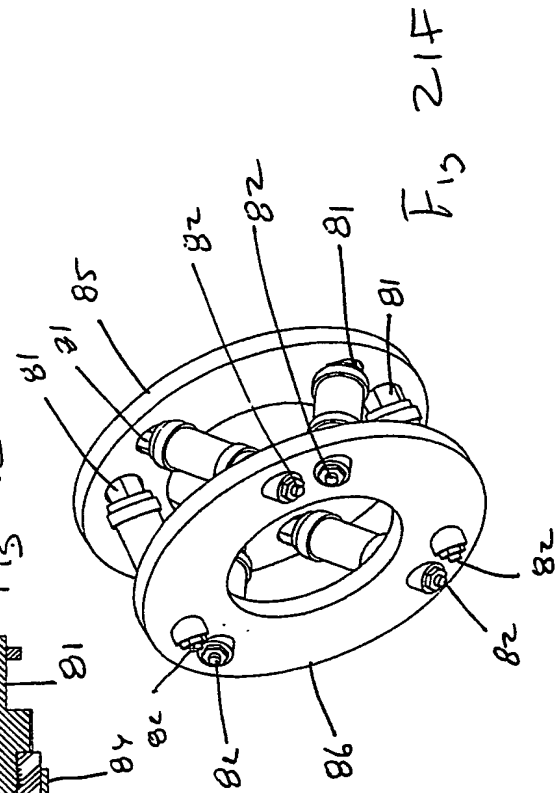


Fig 21f

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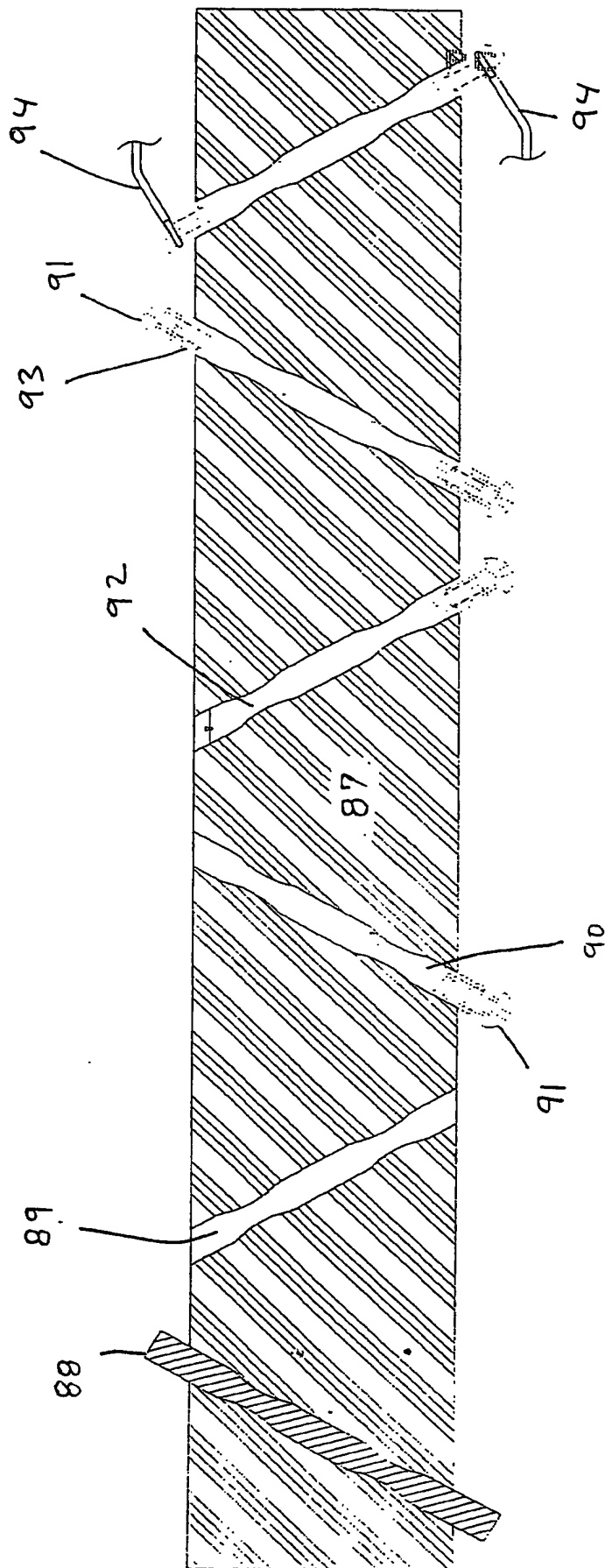


Fig 22

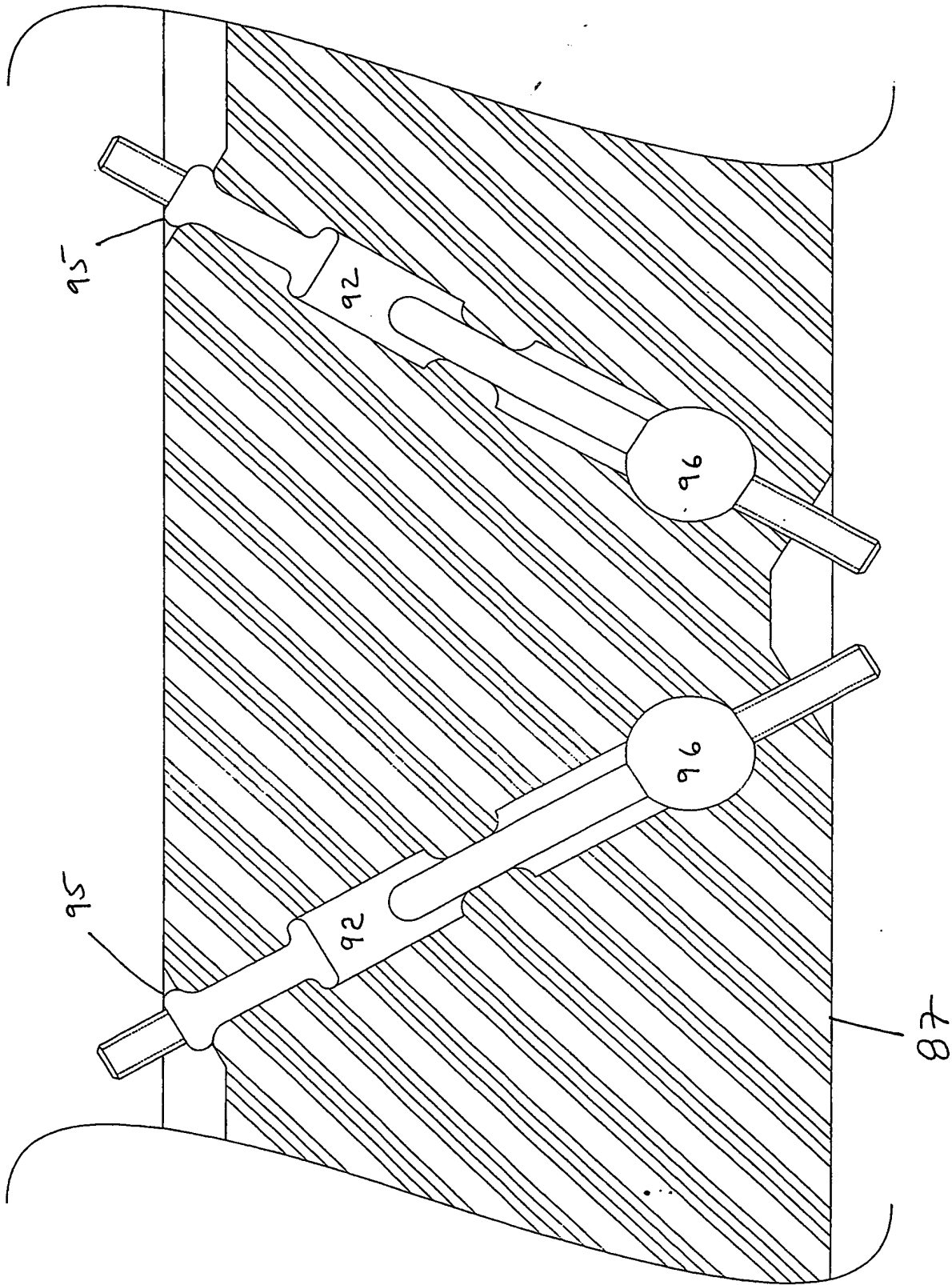


Fig 23



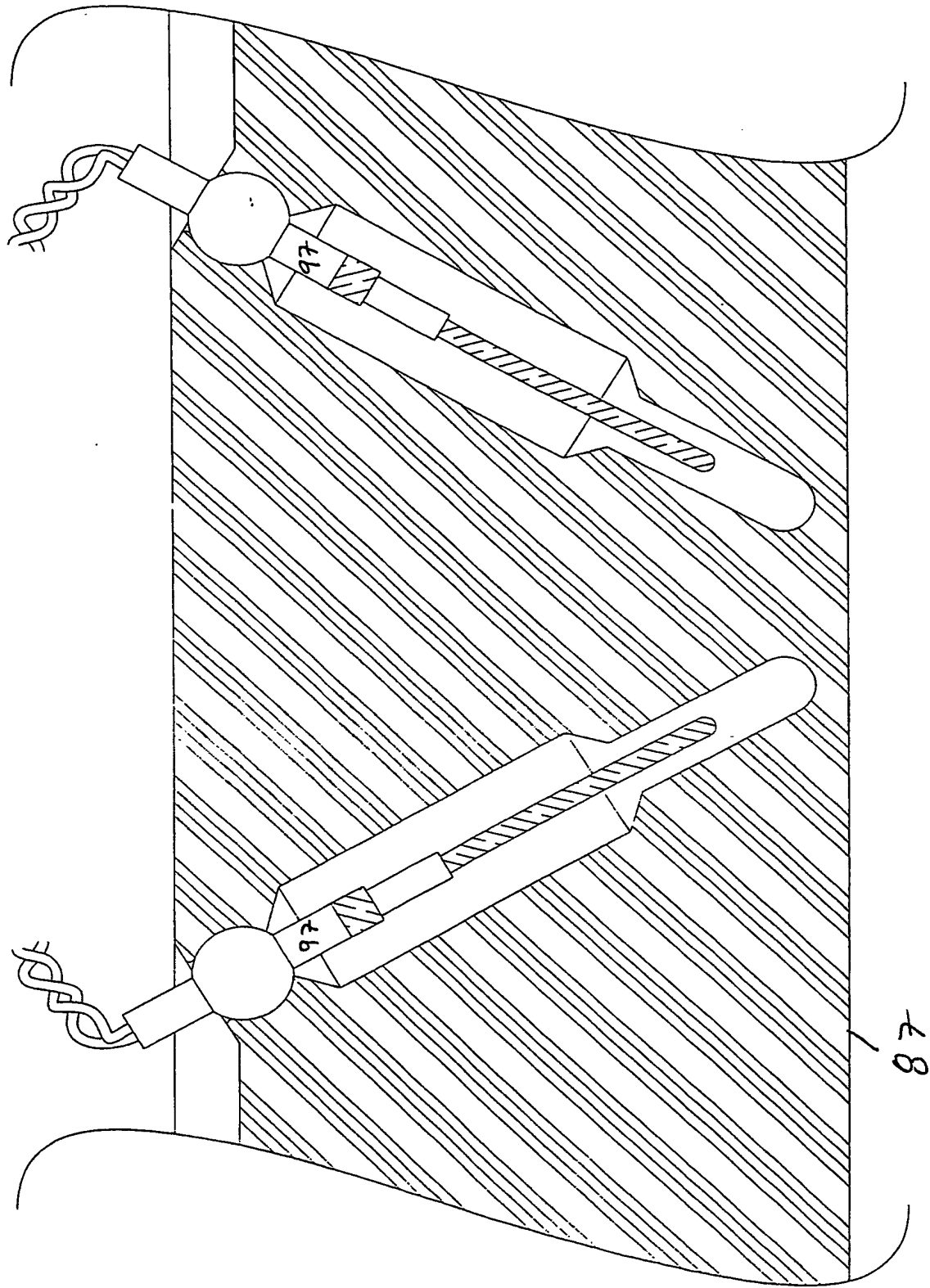


FIG 24

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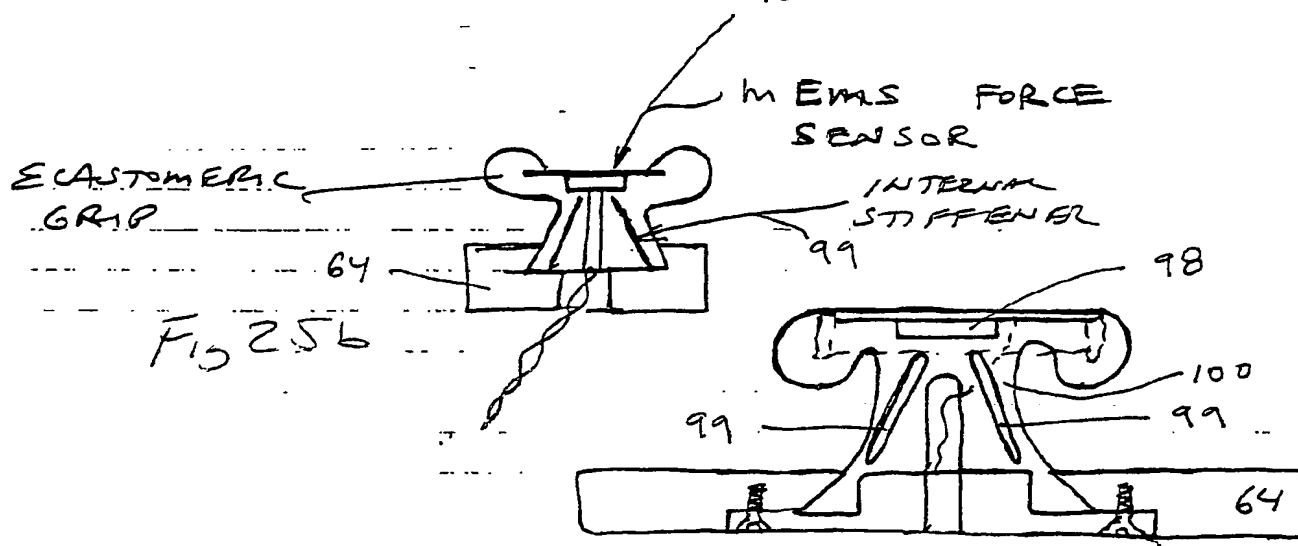
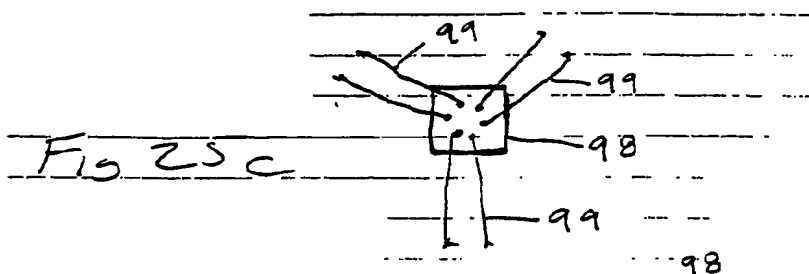


Fig 25a

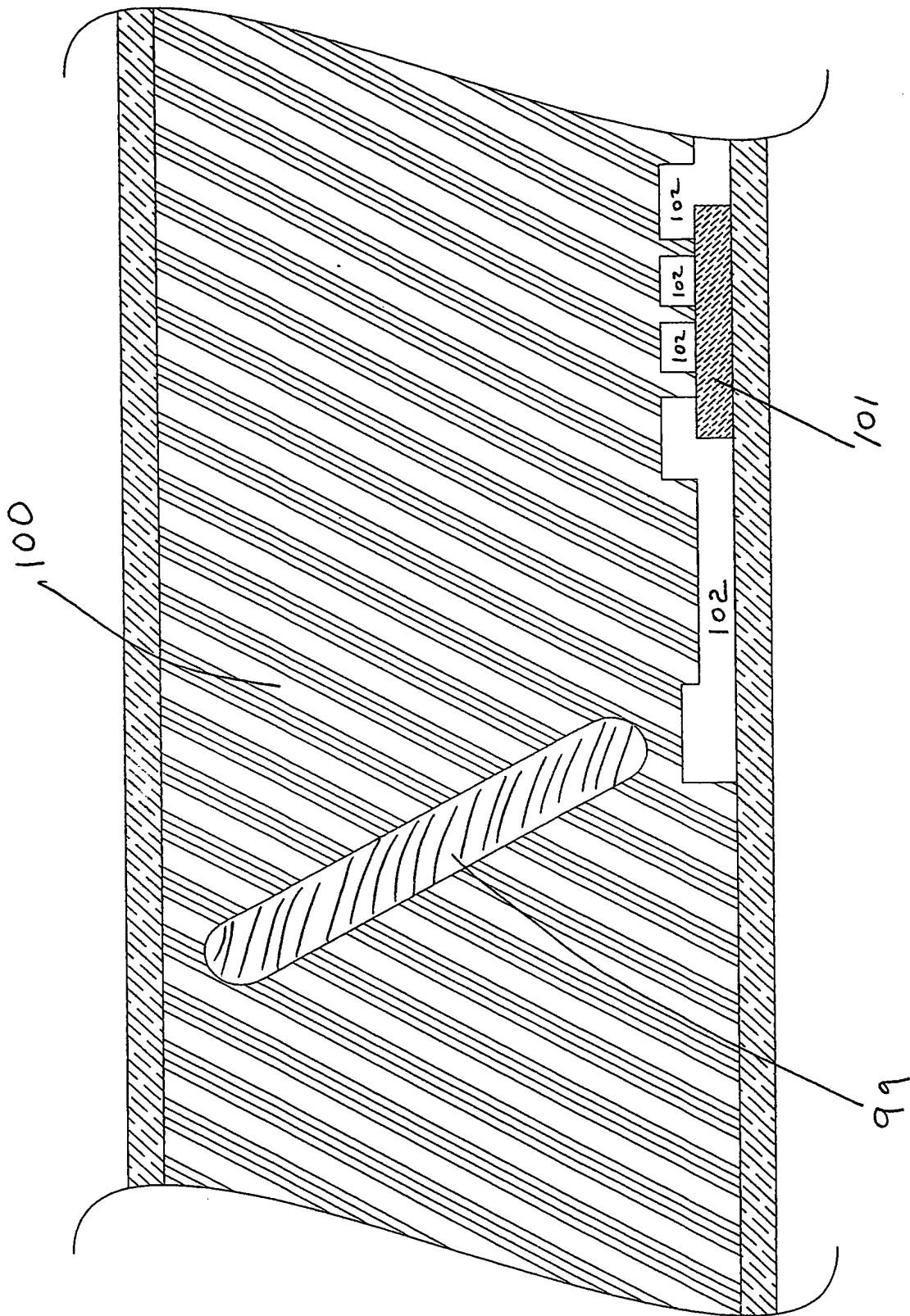


Fig 26

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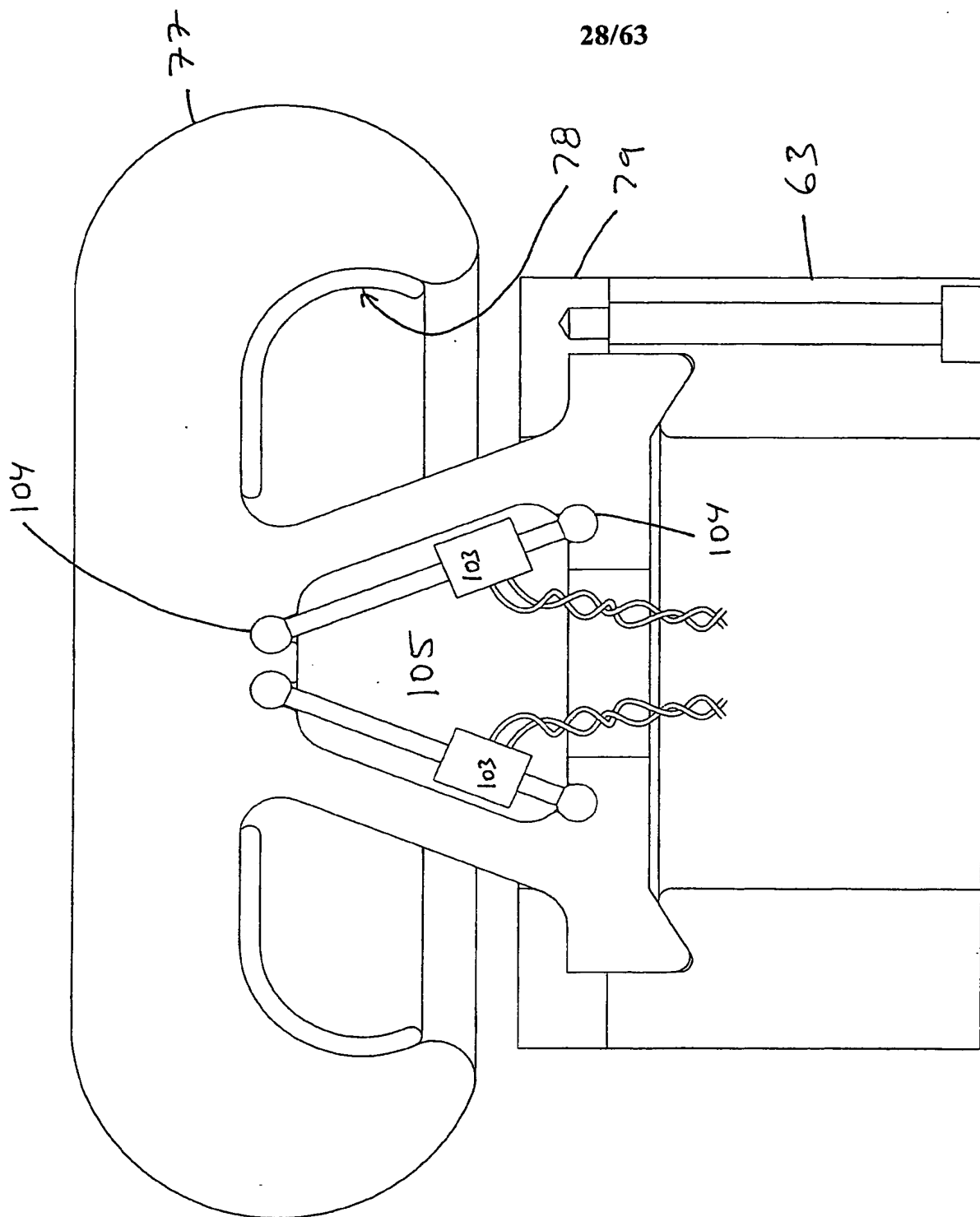


Fig 27

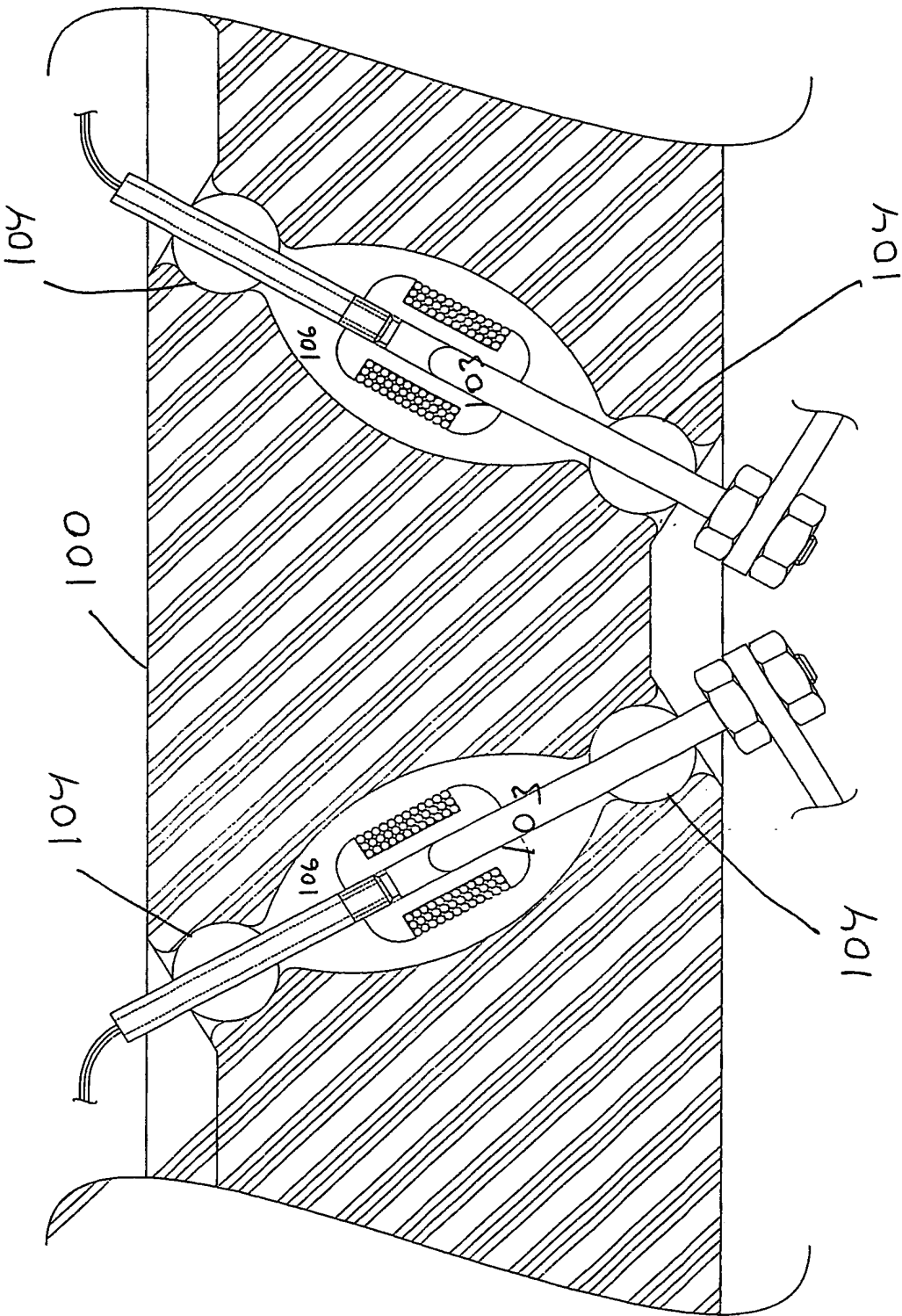


Fig 28

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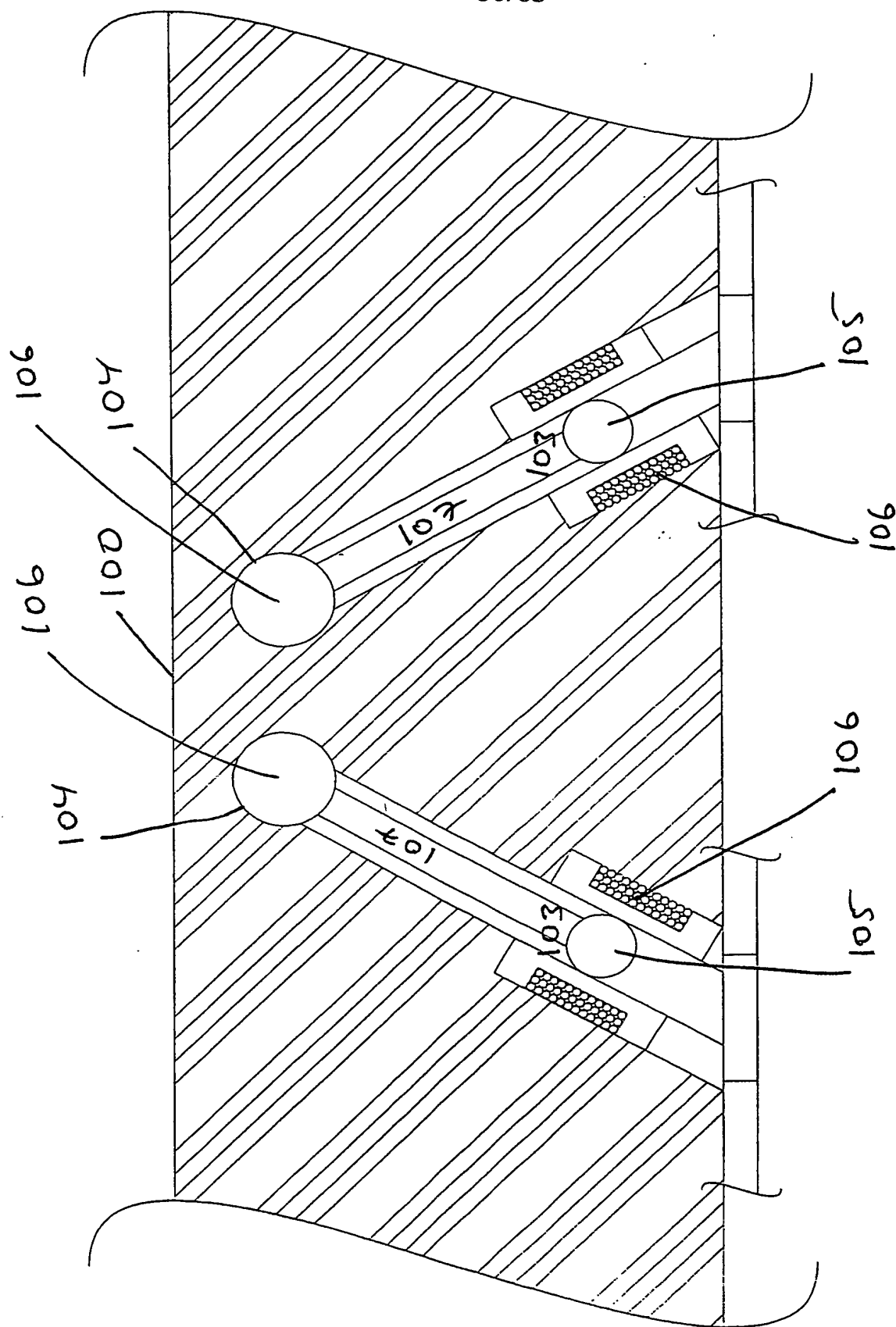


Fig 29

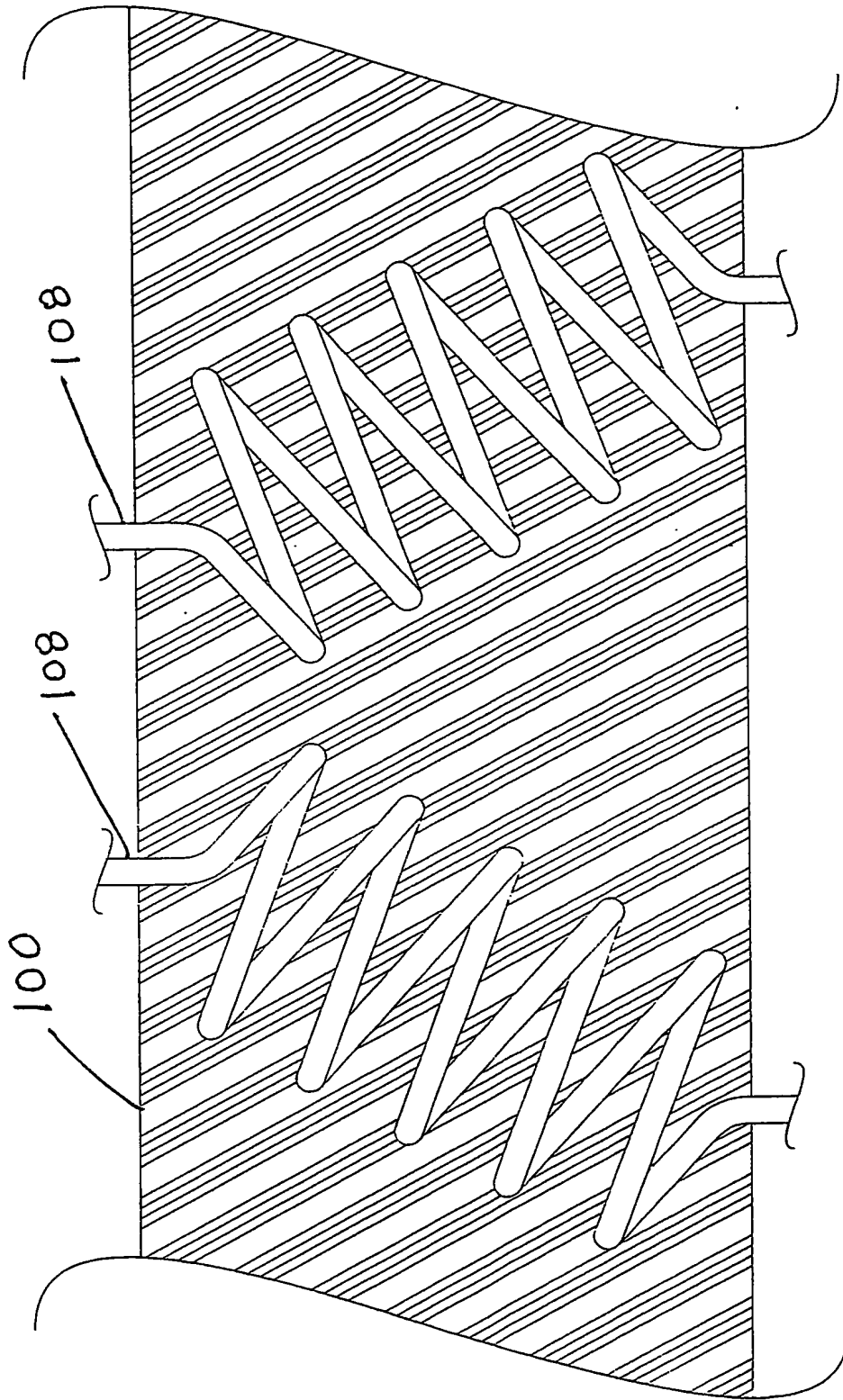


Fig 30

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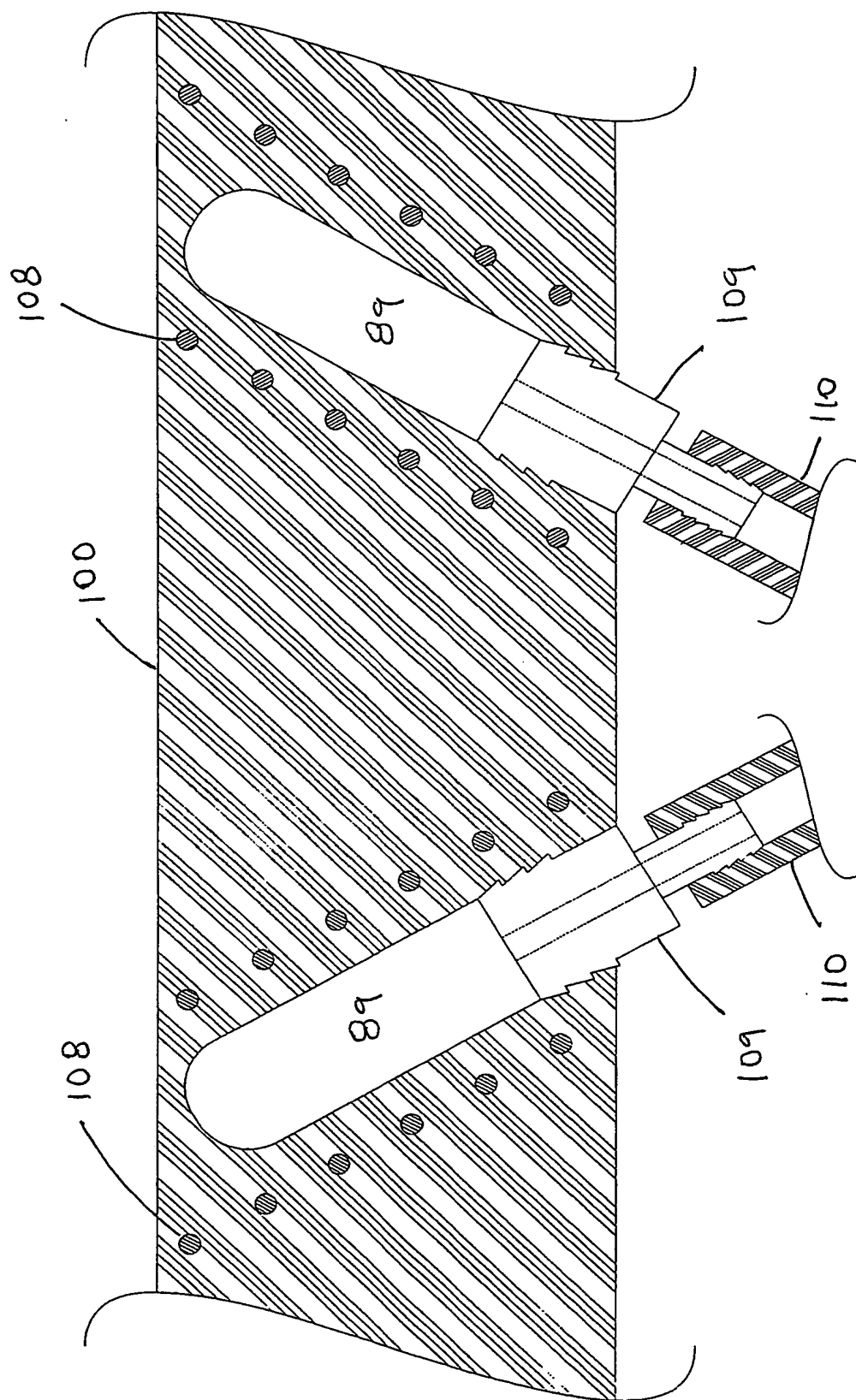


Fig 31



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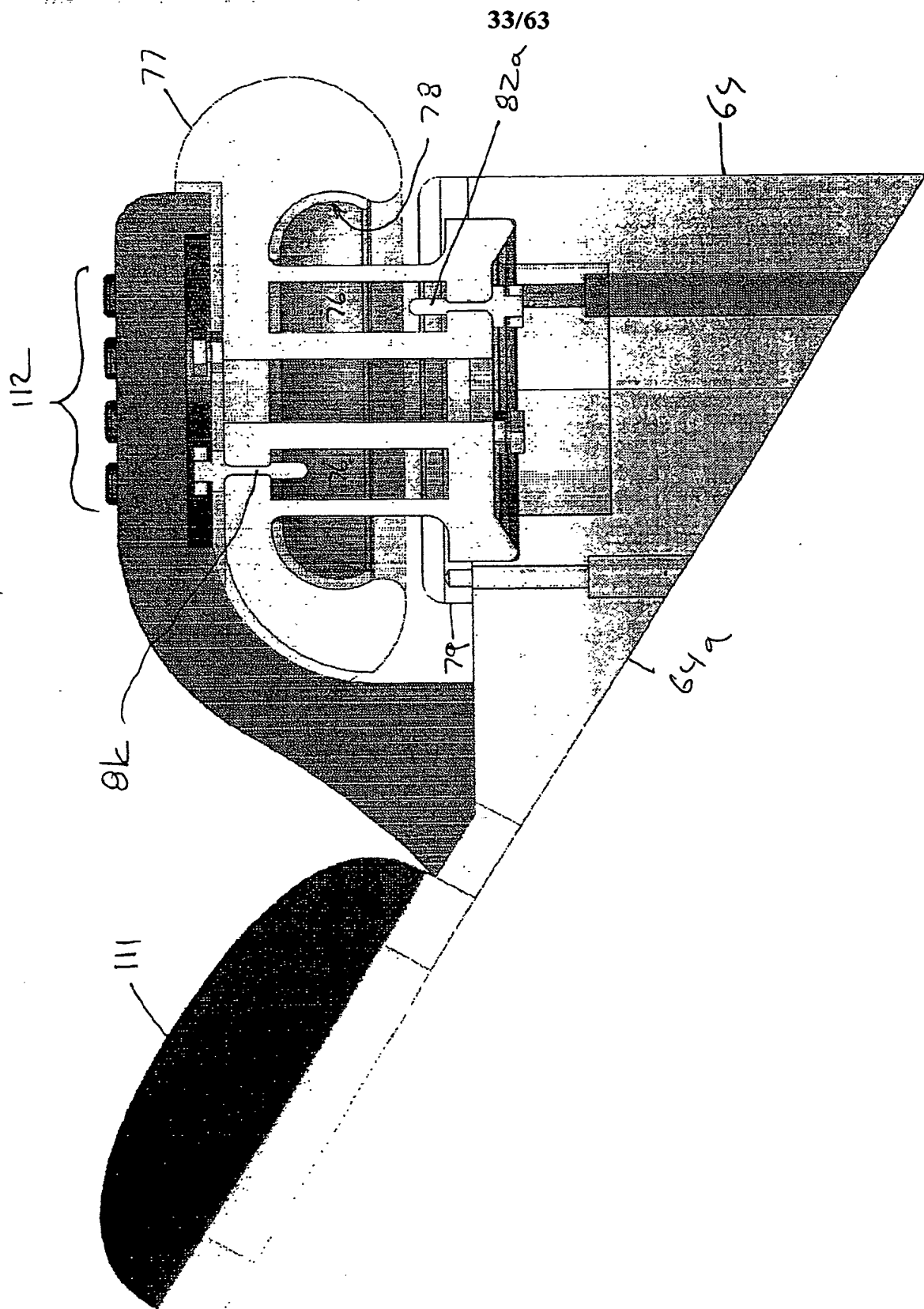


Fig. 32a

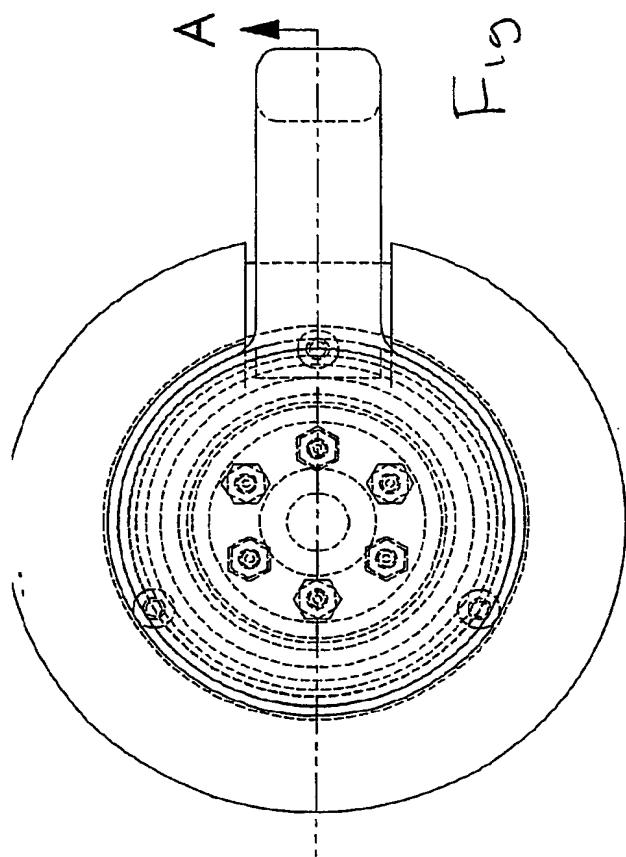
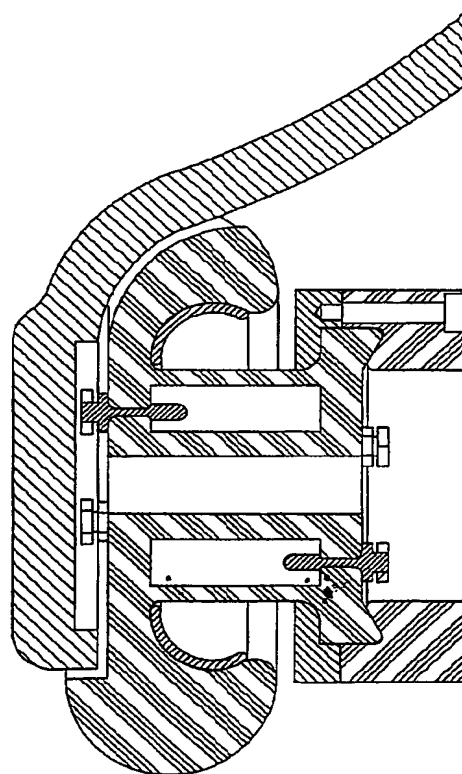


Fig 32.b



SECTION A-A

Fig 32.c

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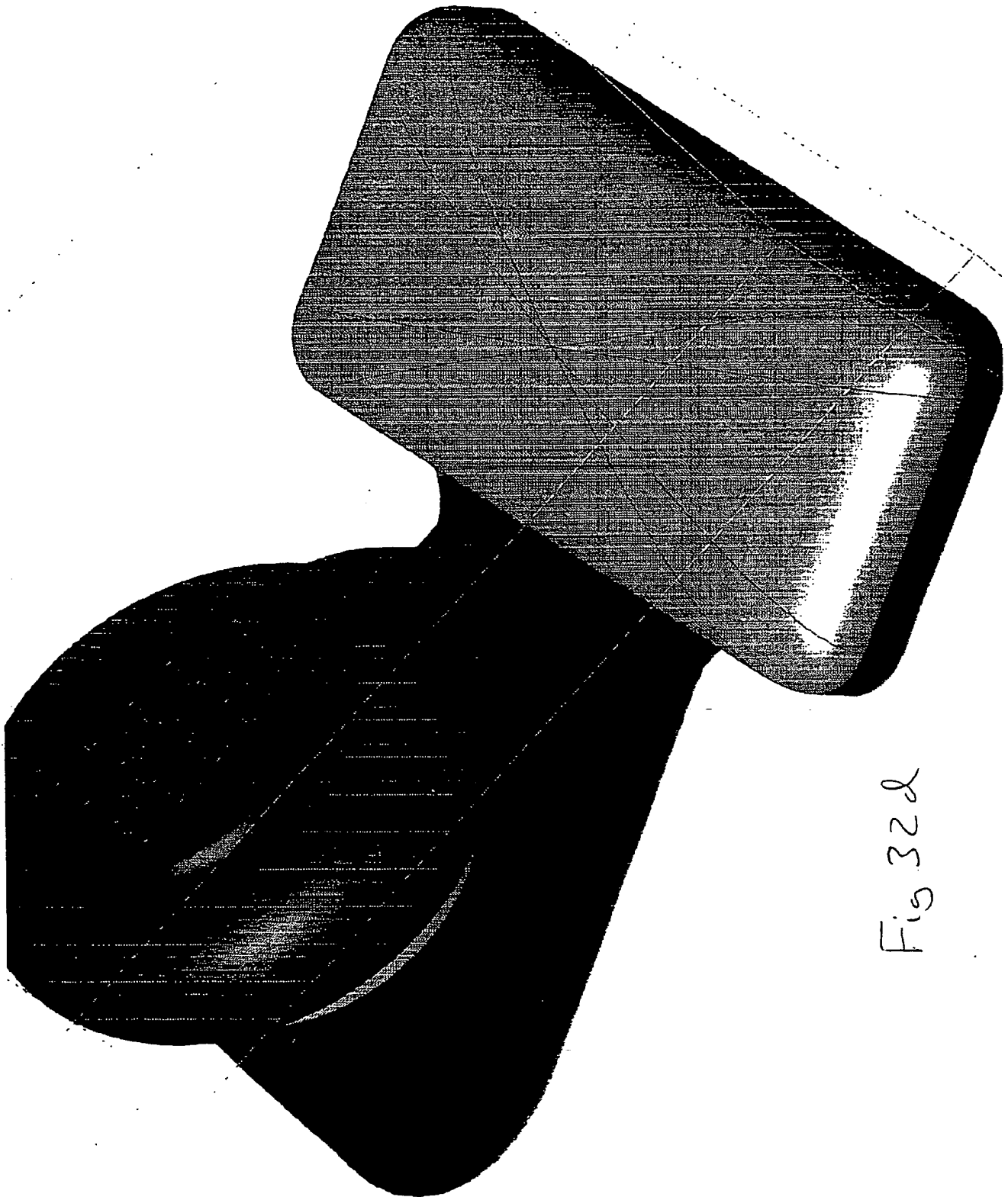


Fig 32d

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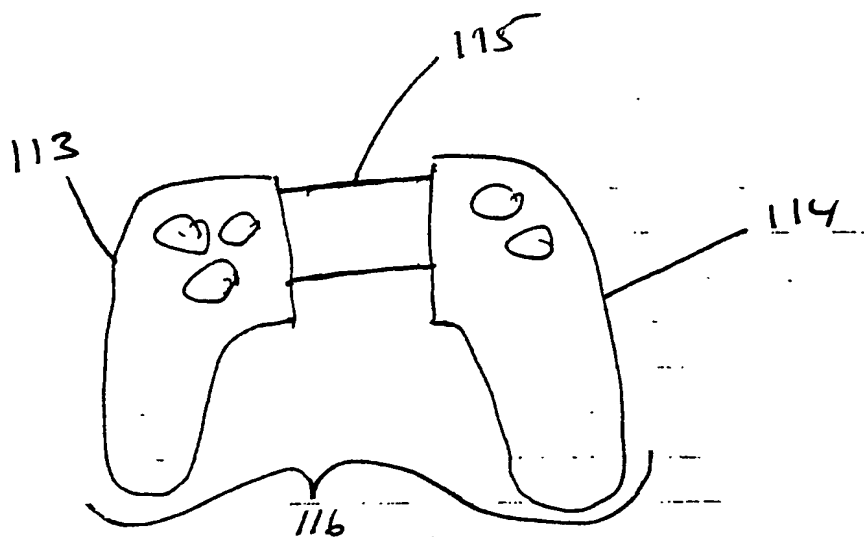


Fig 33

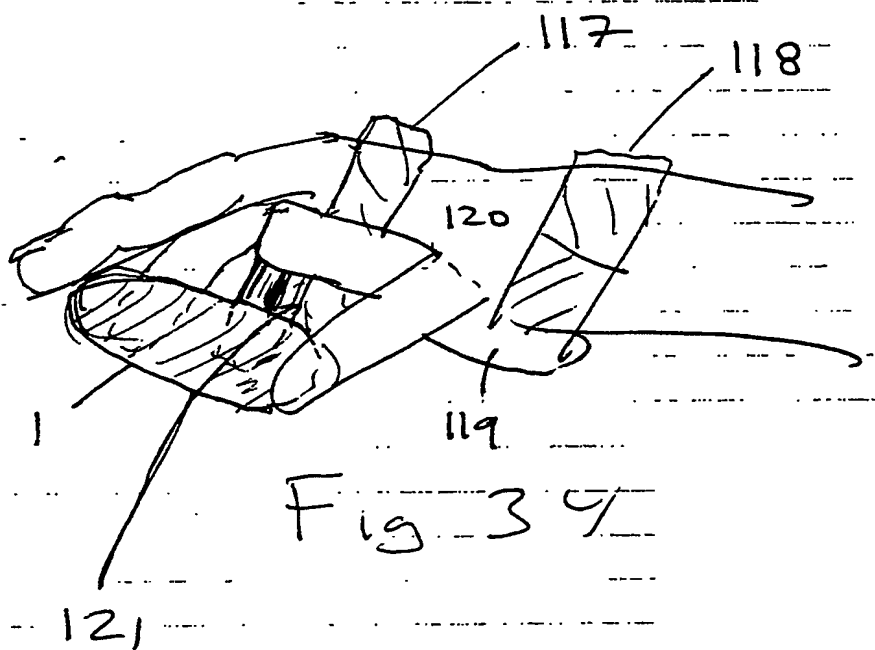


Fig 34

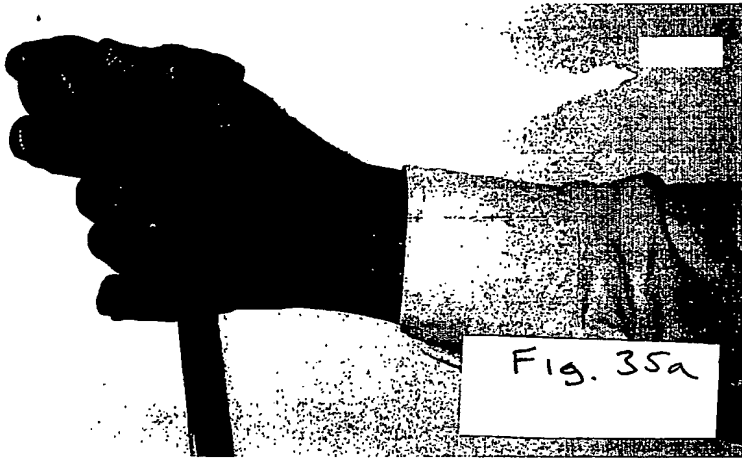


Fig. 35a



Fig 35c



Fig. 35b



Fig 35d



Fig 35e

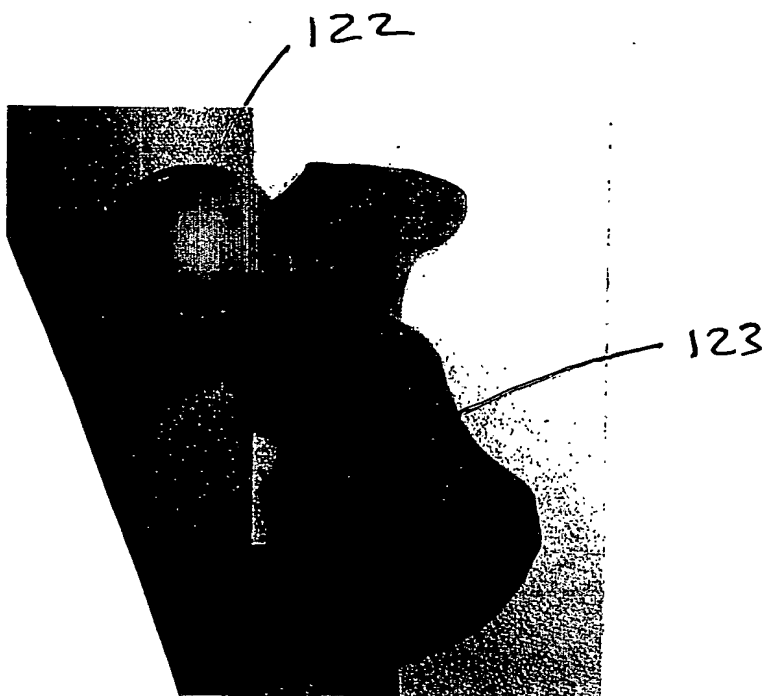


Fig 35f



Fig. 35g

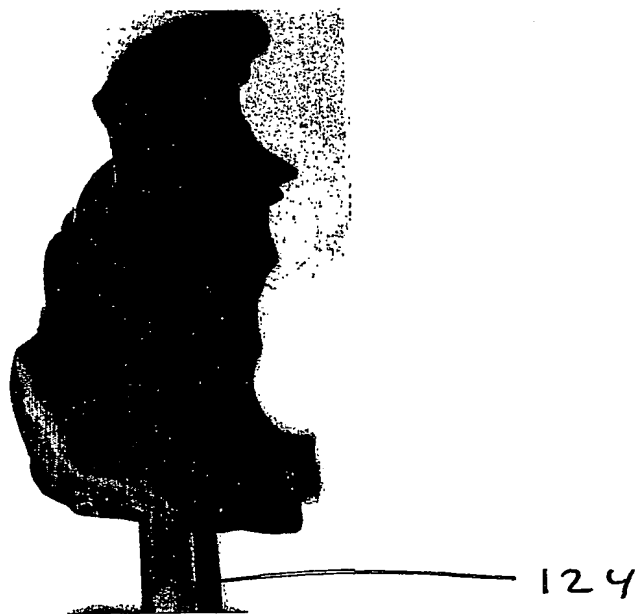


Fig 35h

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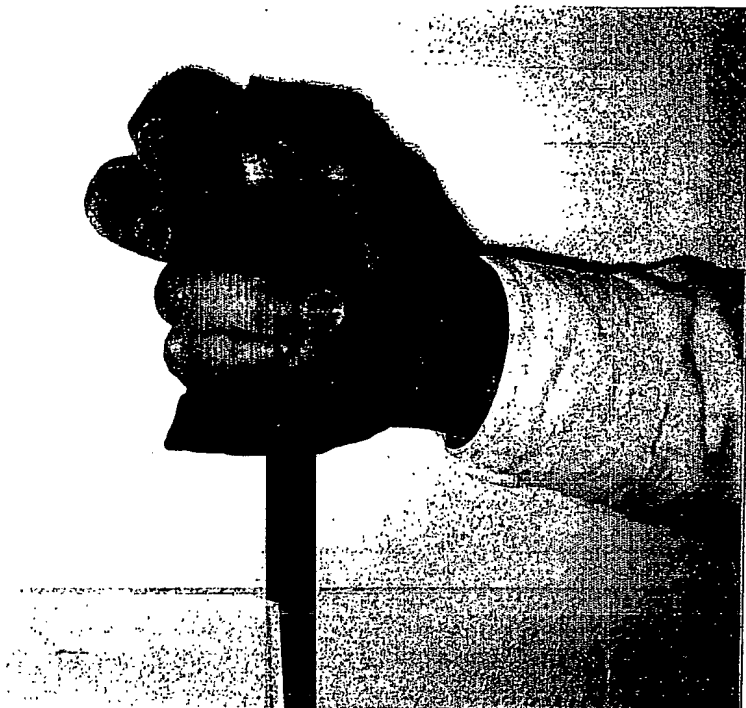


Fig 36a



Fig 36b

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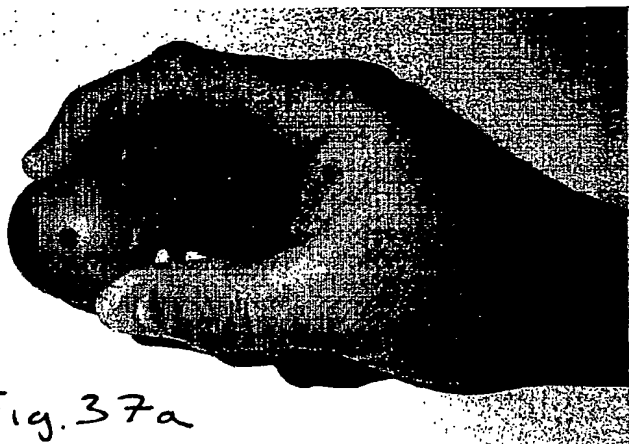


Fig. 37a

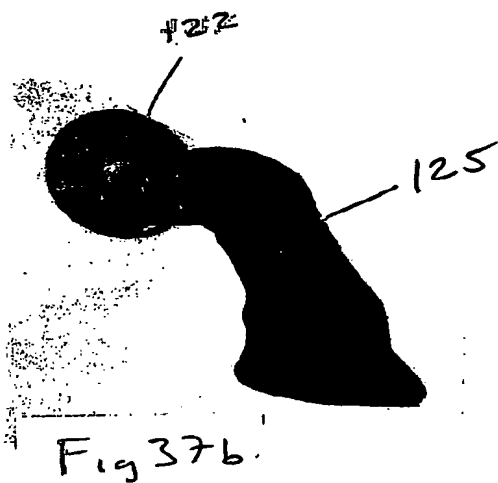


Fig. 37b



Fig. 38a

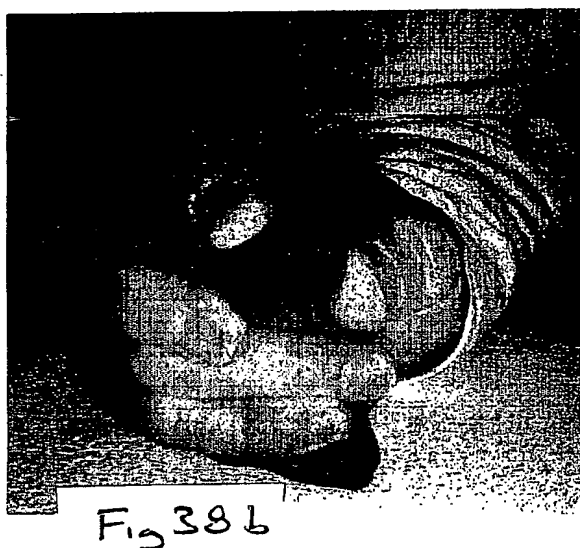


Fig. 38b

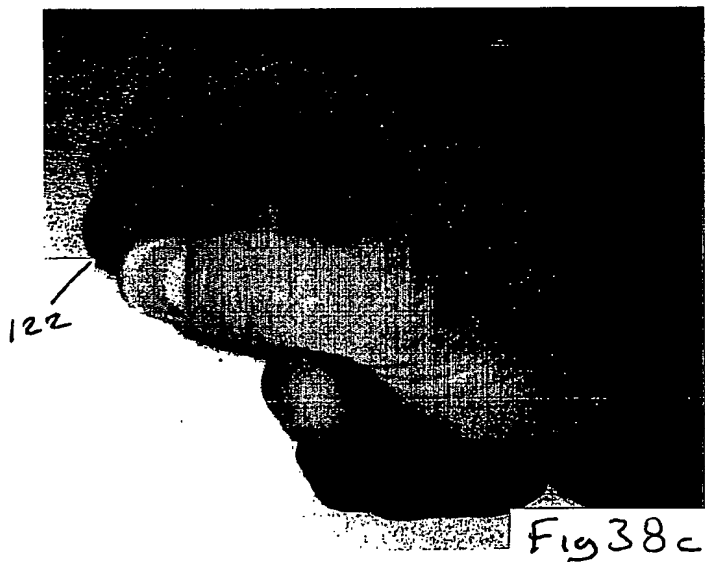


Fig. 38c

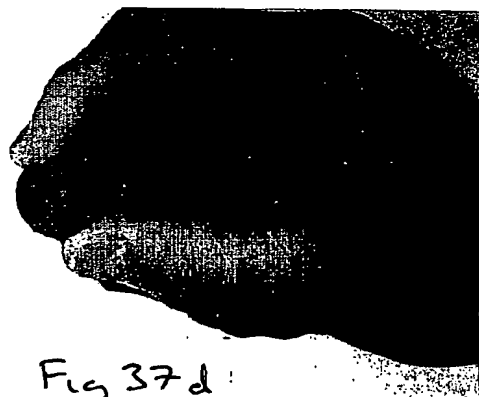


Fig. 37d



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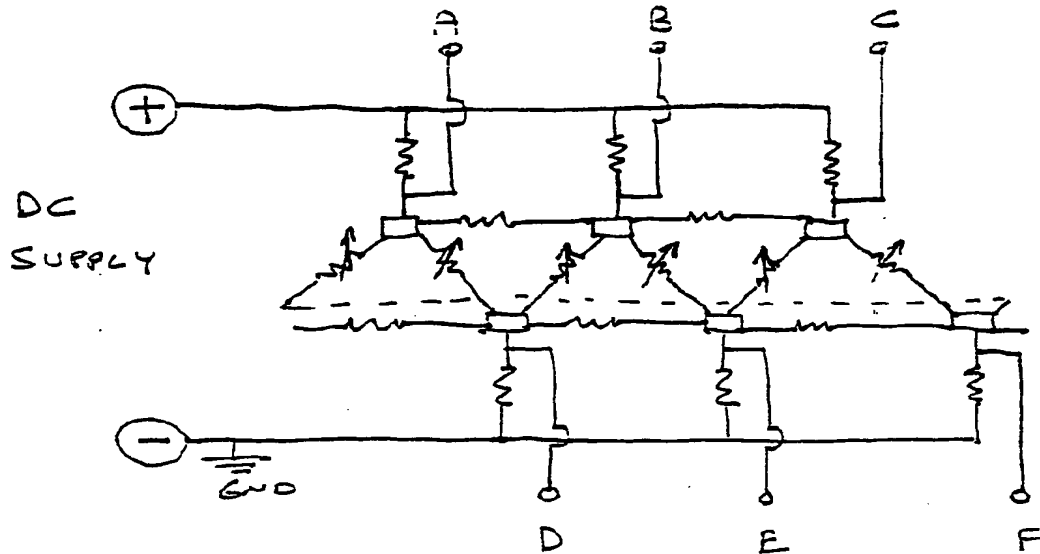


Fig 39

A, B, C, D, E, F, GND ARE CONNECTED TO  
A/D CONVERTER CONNECTED TO COMPUTER.

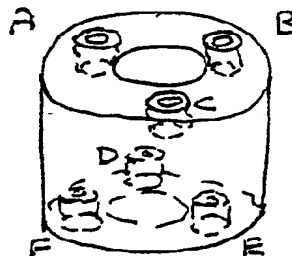


Fig 40a

ELASTOMERIC SENSING ELEMENT

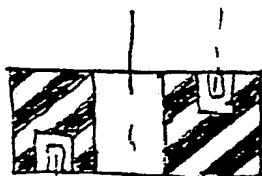


Fig 40b

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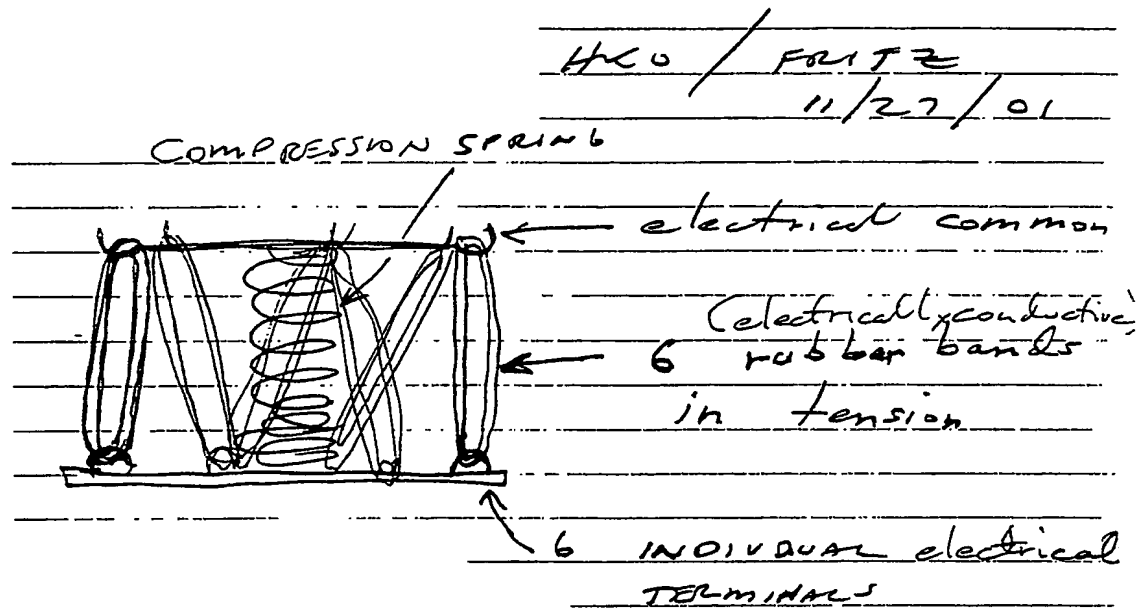


Fig 41

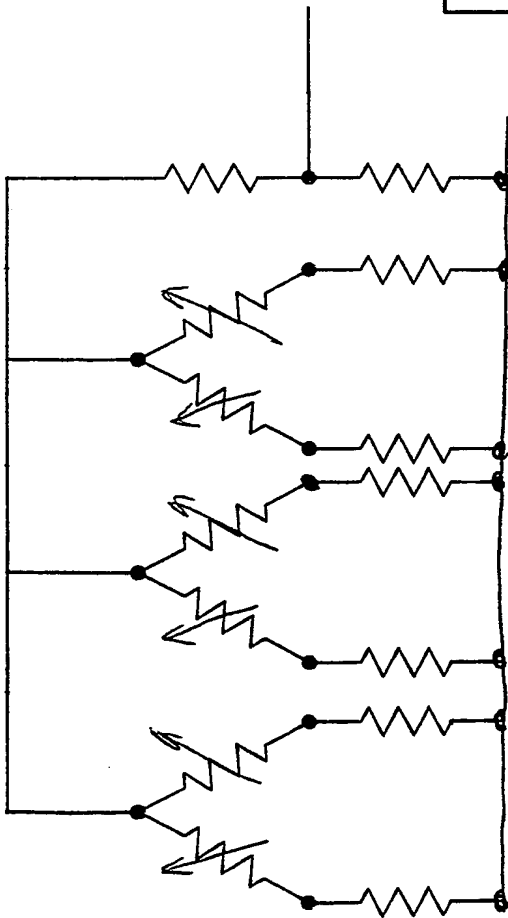


Fig 42

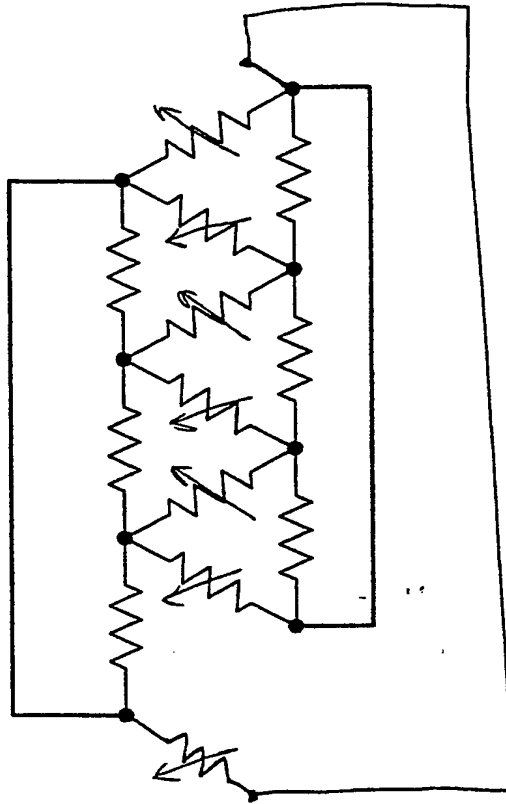
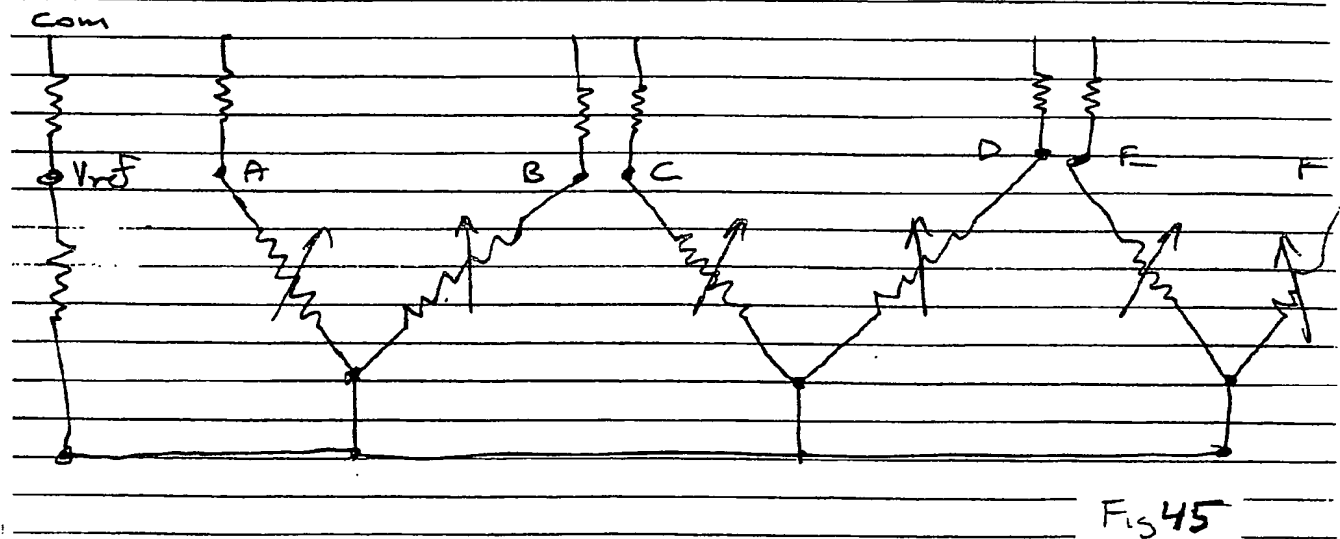
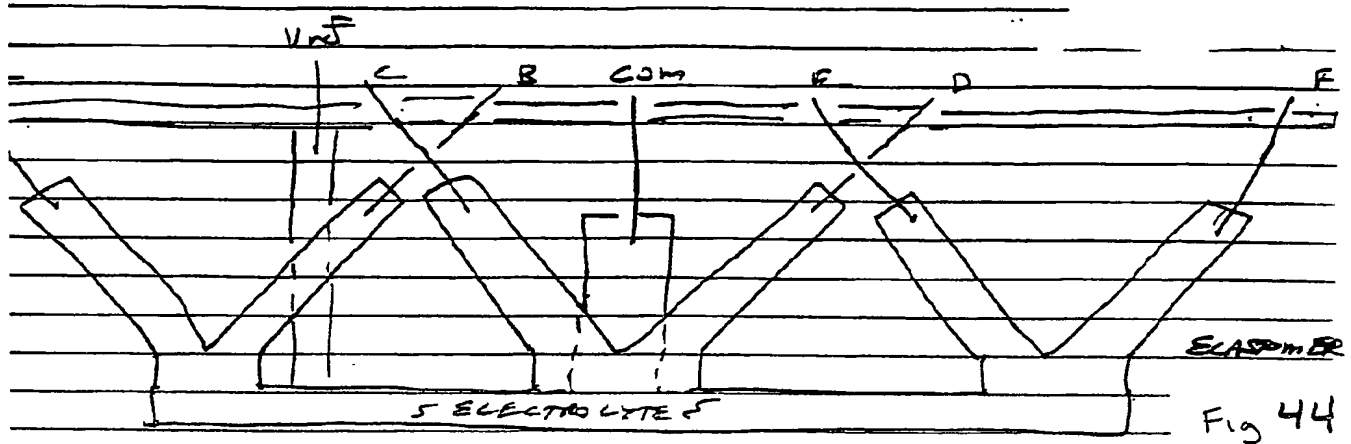


Fig 43

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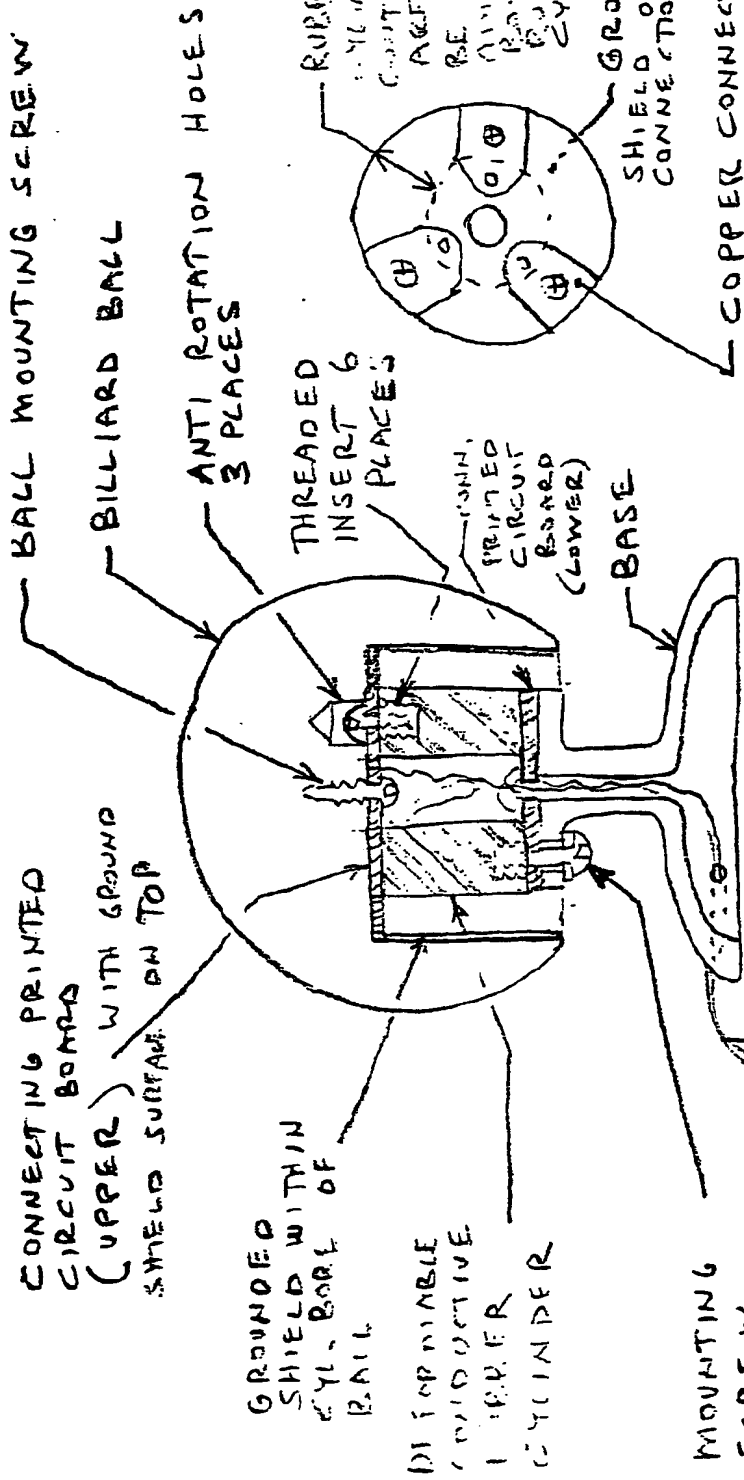


Fig 46

CONNECTING  
PRINTED CIRCUIT  
BOARD (TYP.)

VOLTAGES & PHASE  
ANGLES OF D, E, & F  
ARE A FUNCTION OF  
BALL POSITION &  
ORIENTATION,

6 AXIS INPUT  
DEVICE

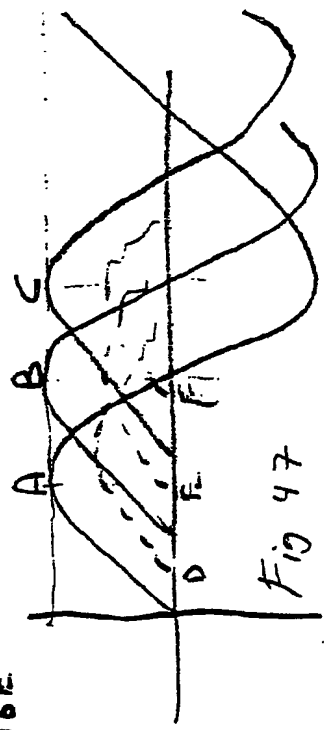


Fig 47

INPUT VOLTAGE  
A, B, C  
OUT PUT  
SIGNAL  
D, E, F

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Fig. 49a

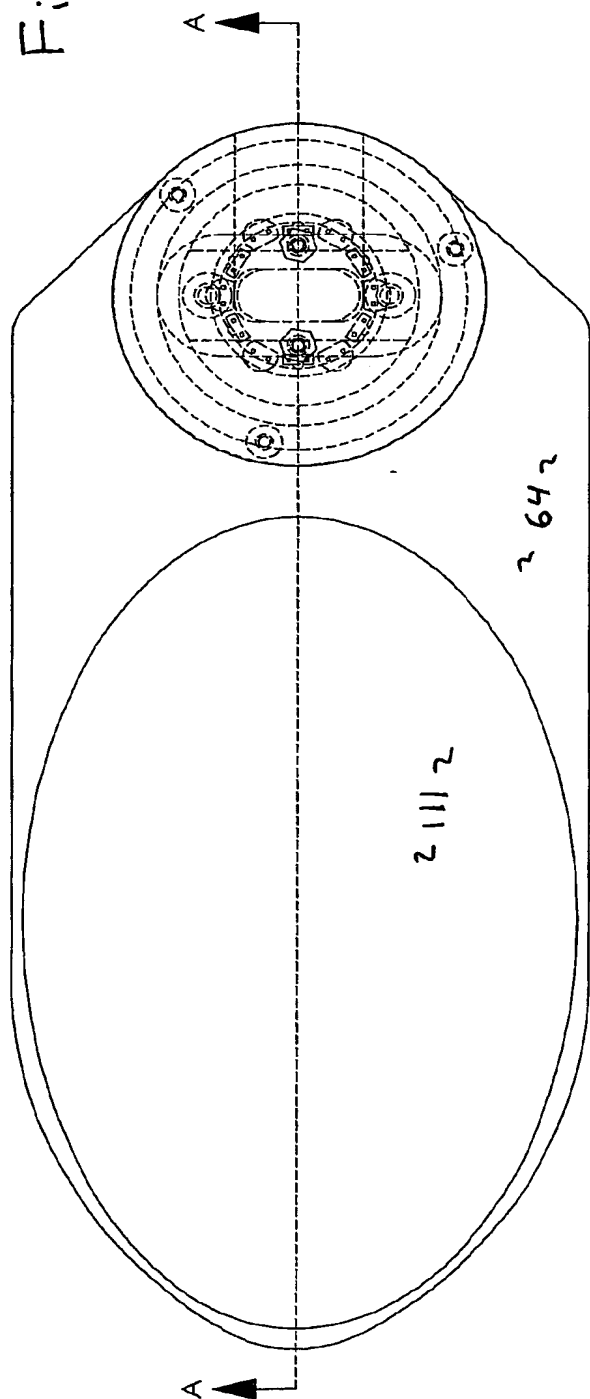
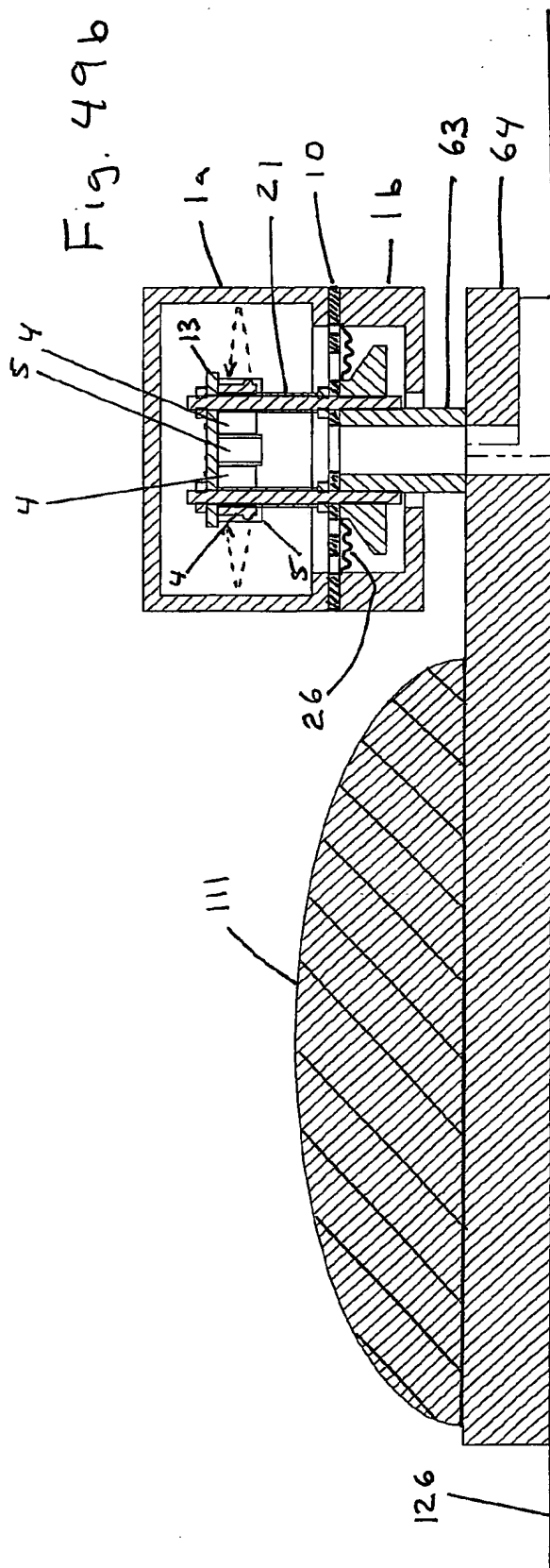


Fig. 49b



SECTION A-A  
SCALE 1:1

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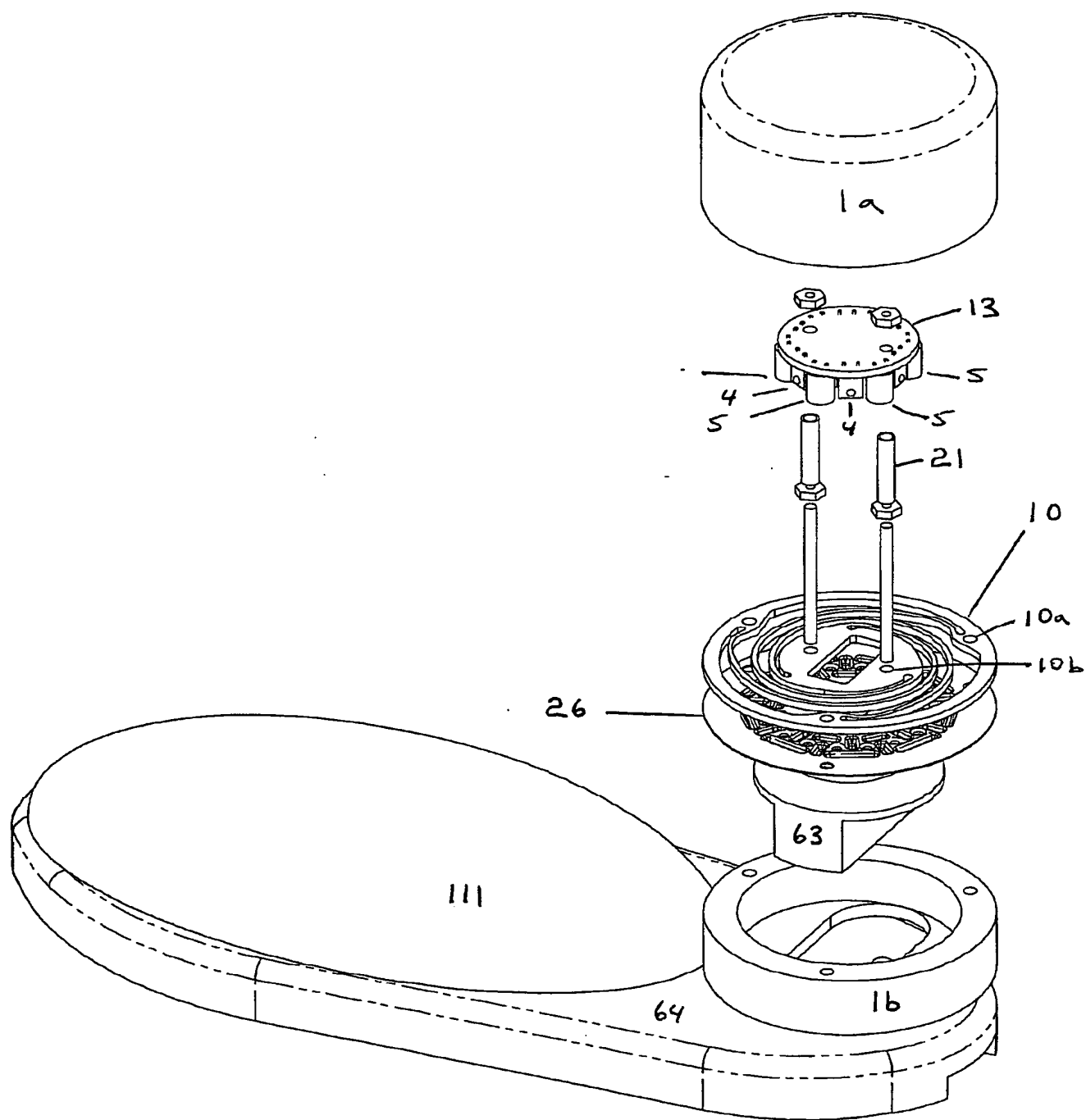
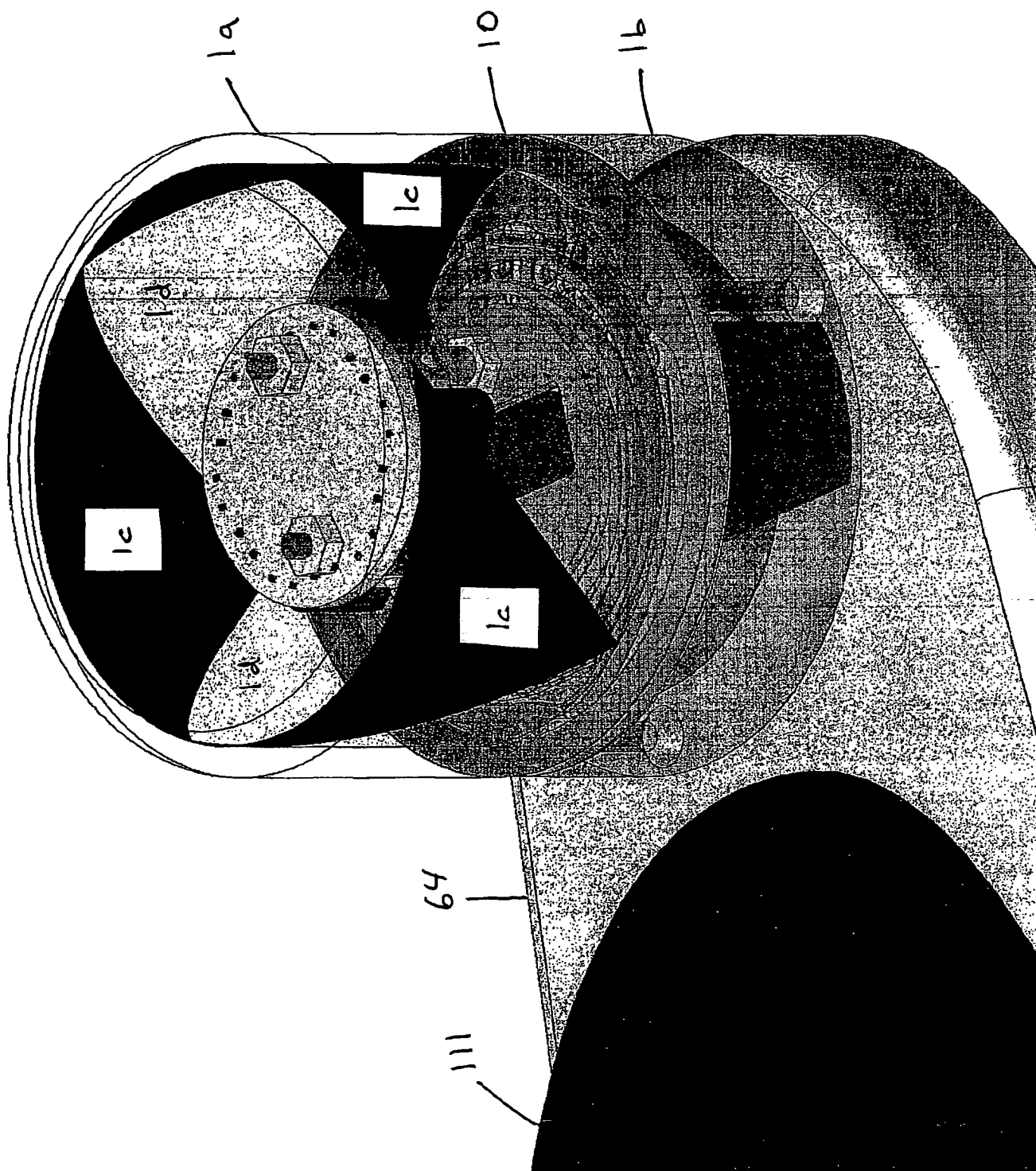


Fig 49c

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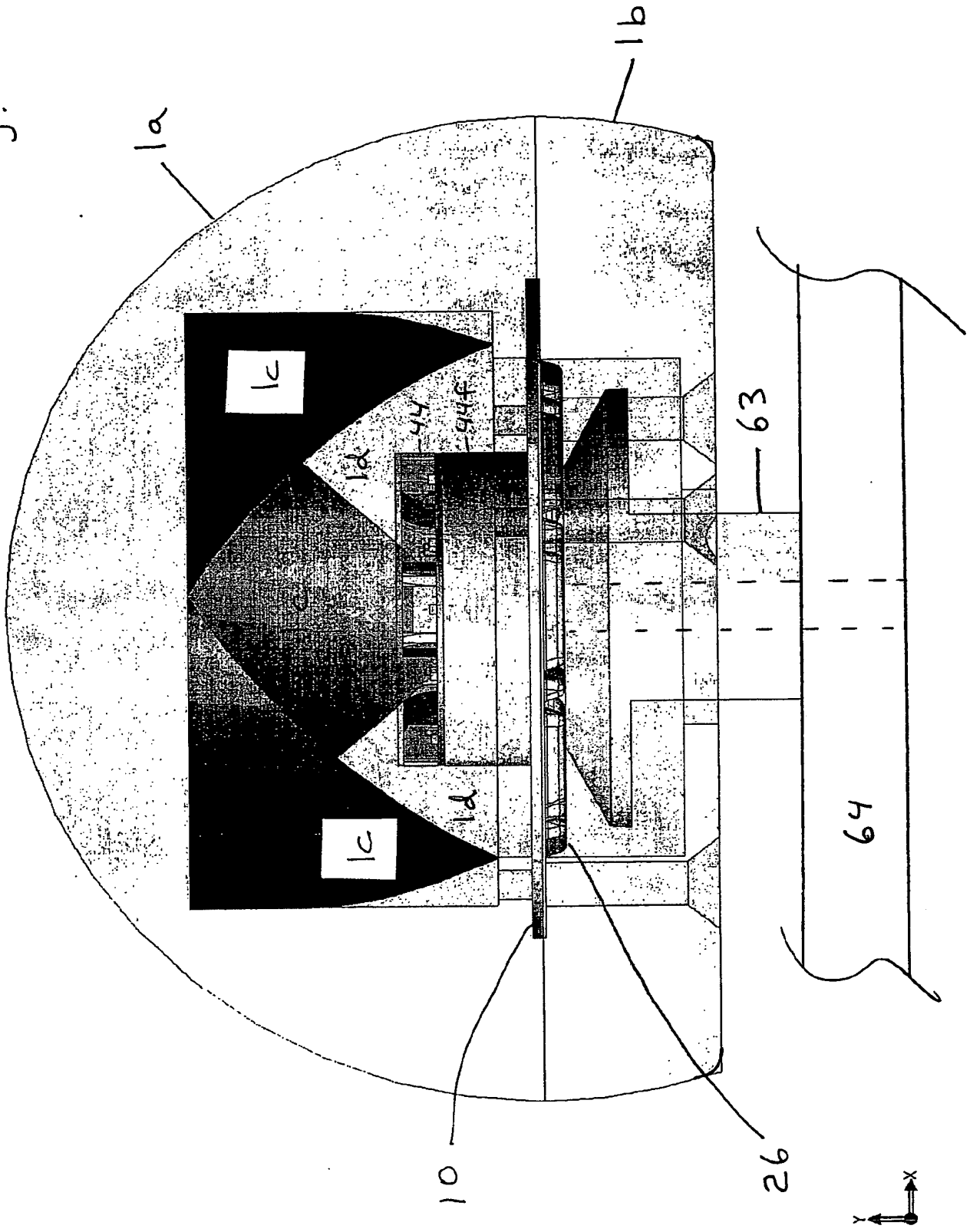
Fig 49d





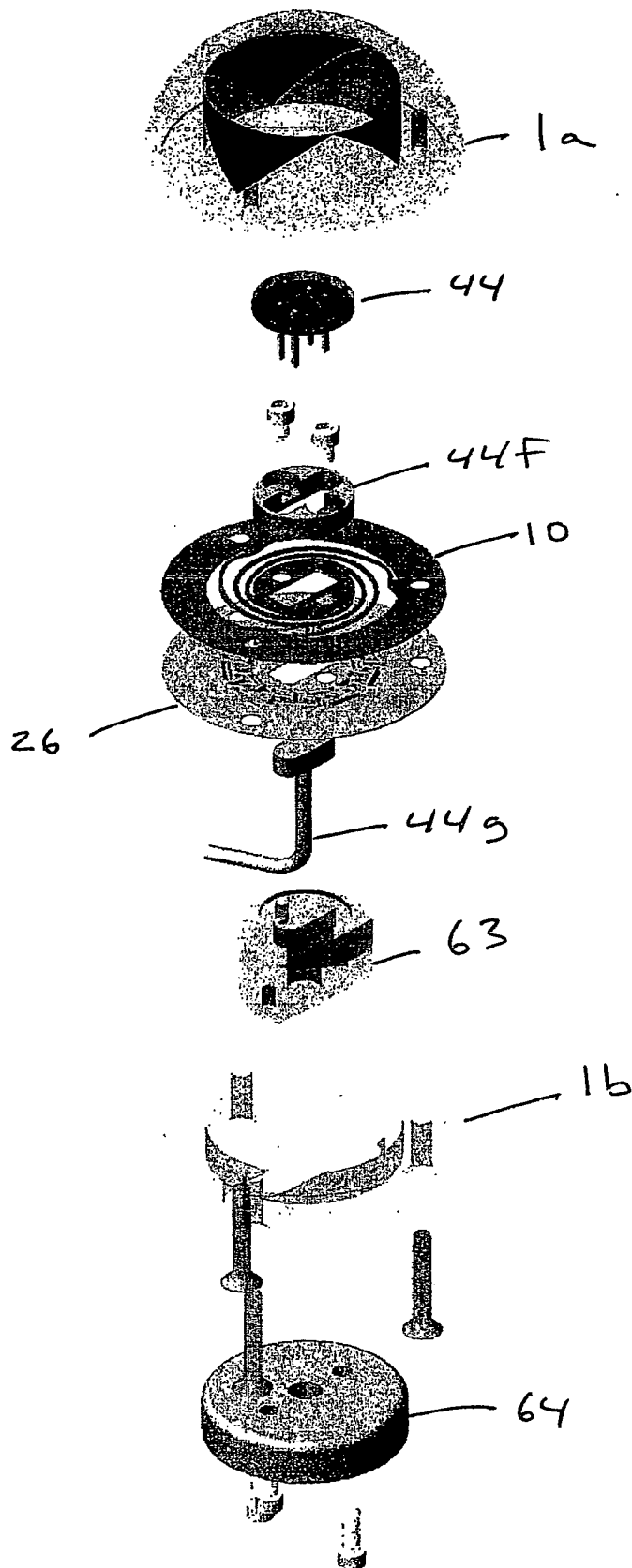
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Fig. 50a



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Fig. 50b



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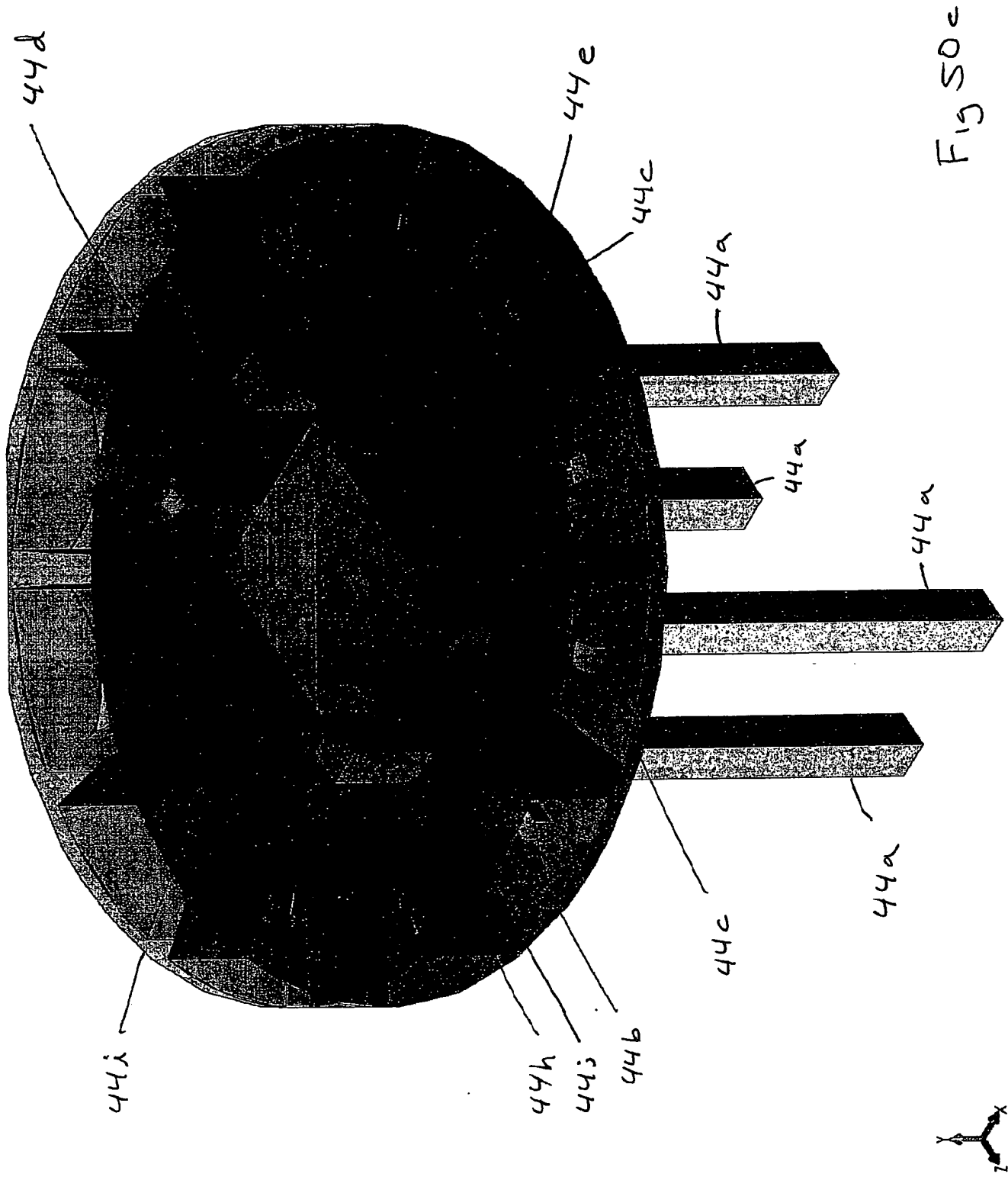


Fig 50c

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Fig 51a

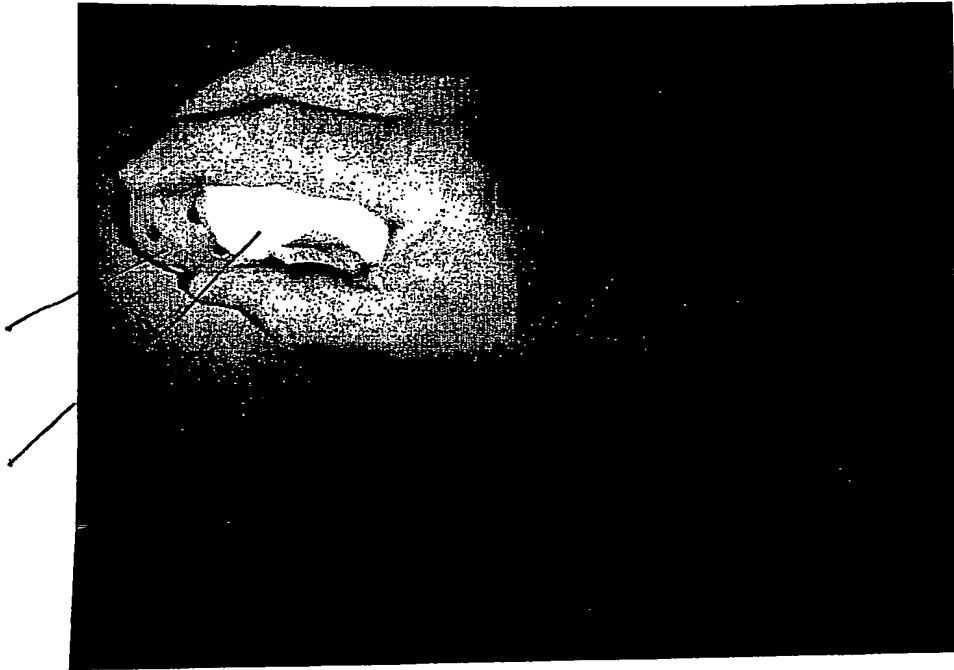
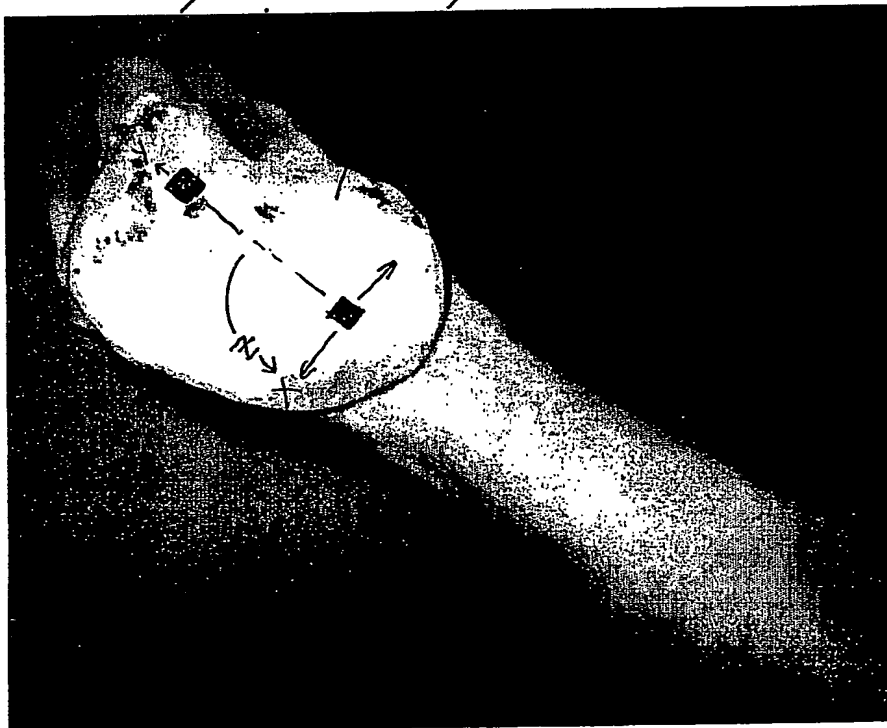


Fig 51b



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Fig. 51c

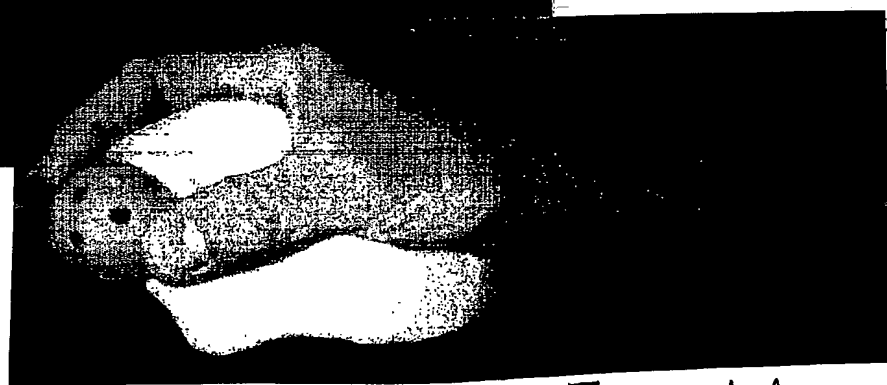


Fig 51d



Fig 51e



Fig. 51f



Fig. 51g

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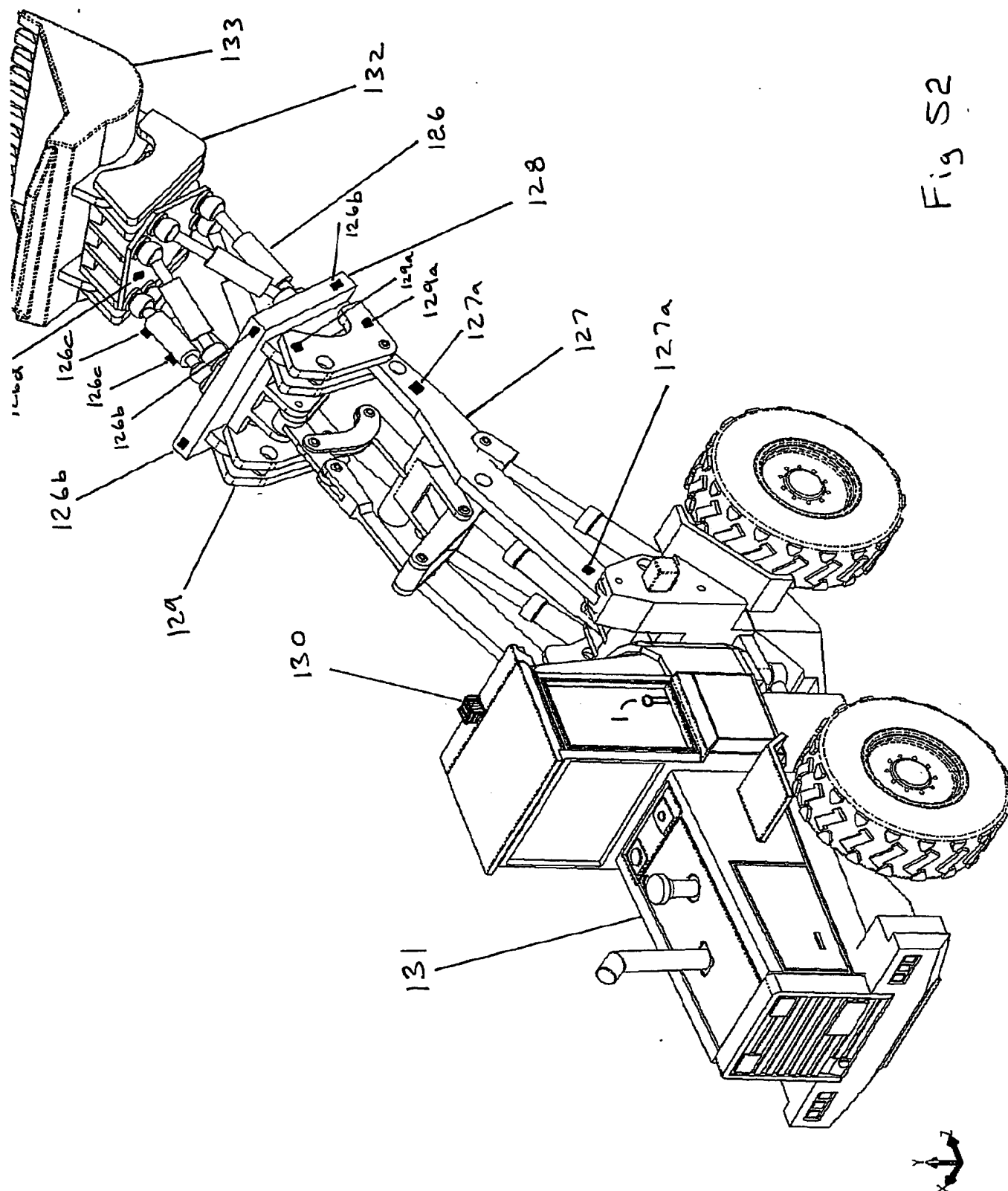
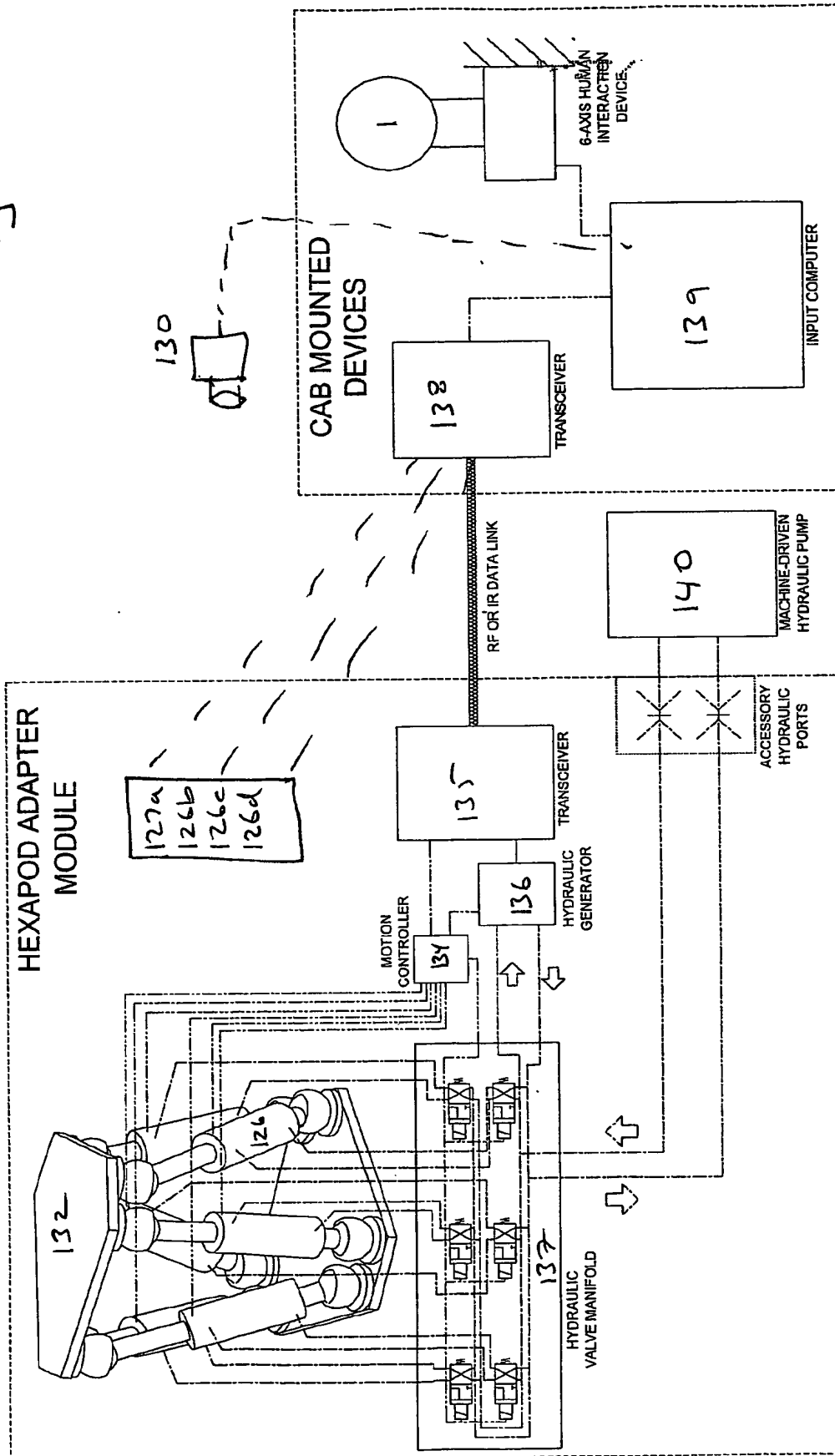


Fig S3



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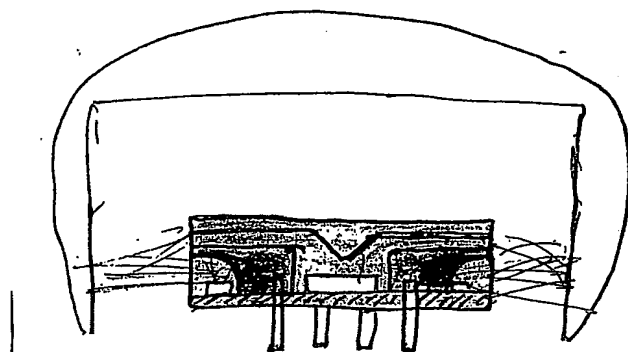


Fig 54a

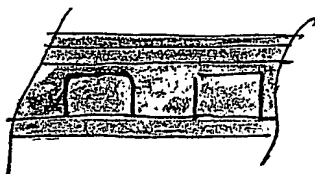
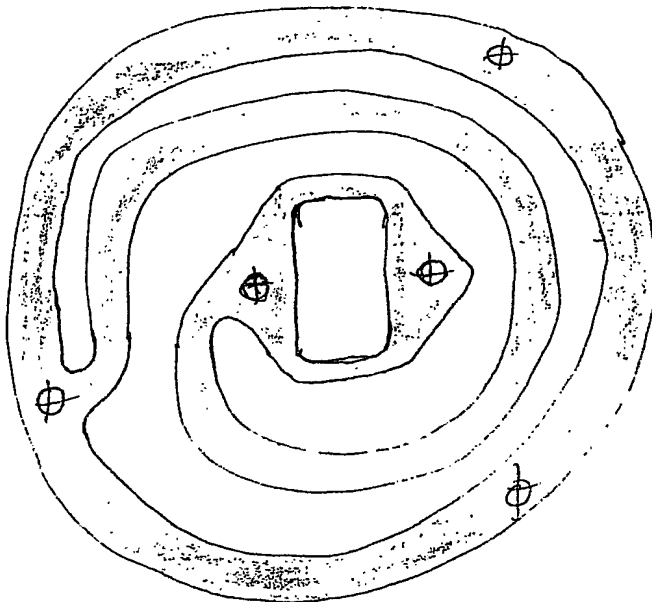


Fig 54b



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Fig 60



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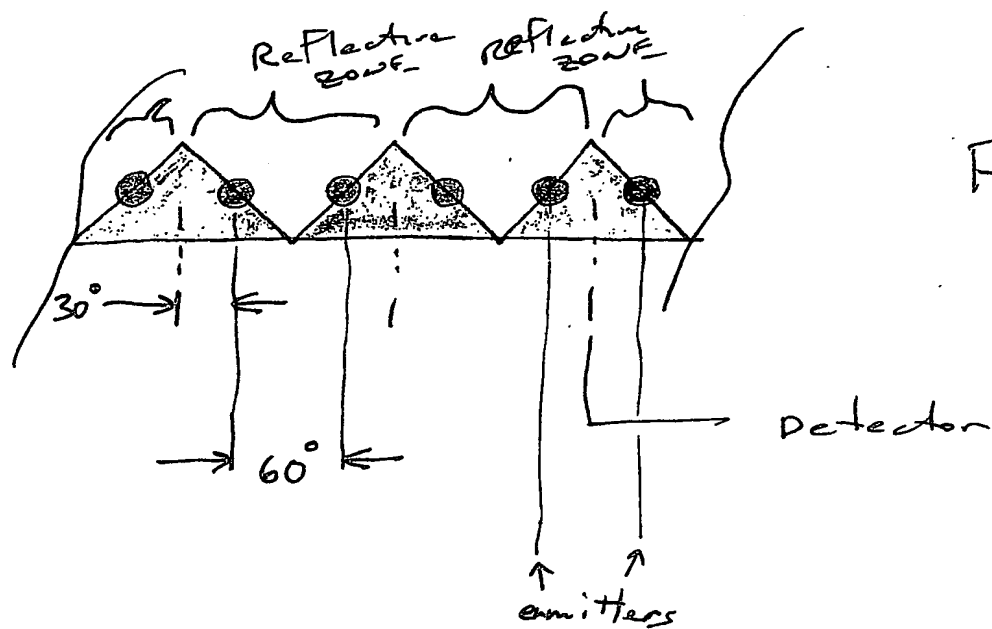
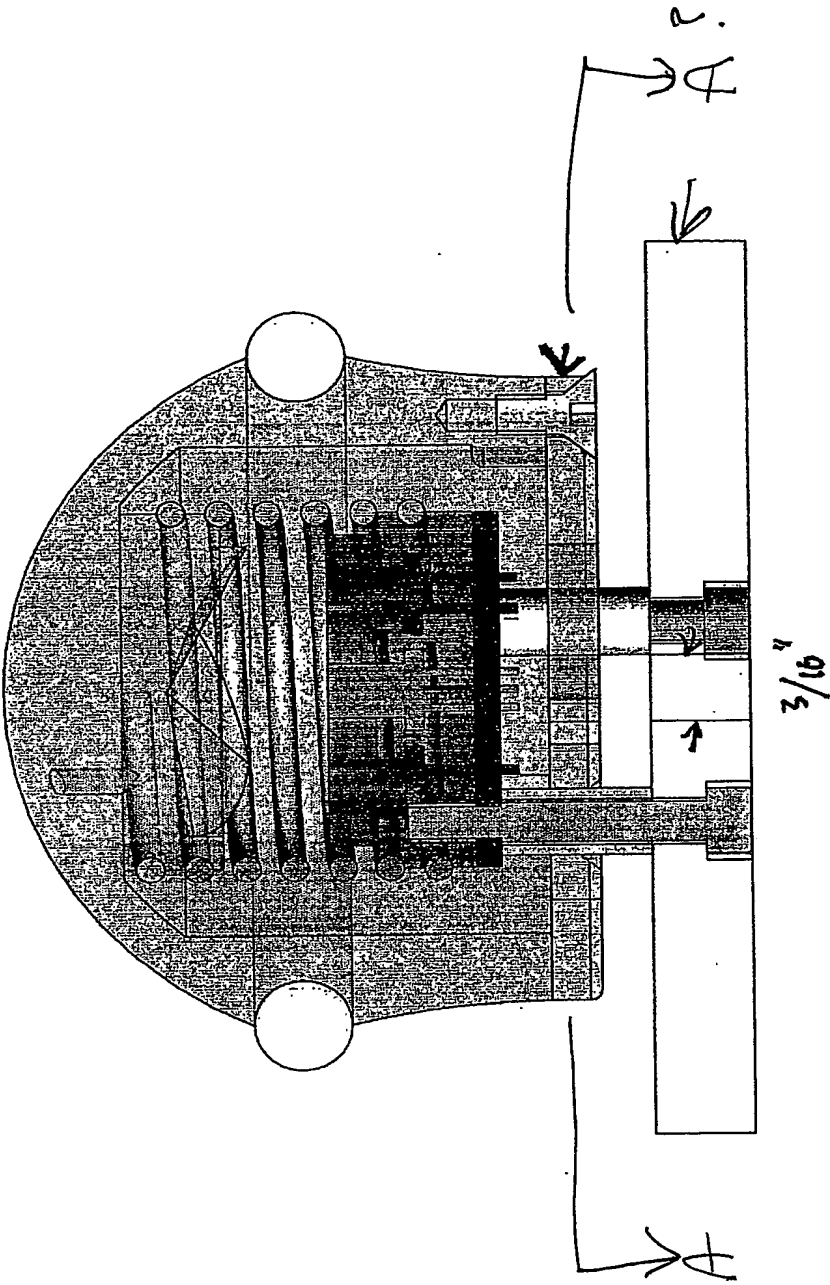


Fig 57

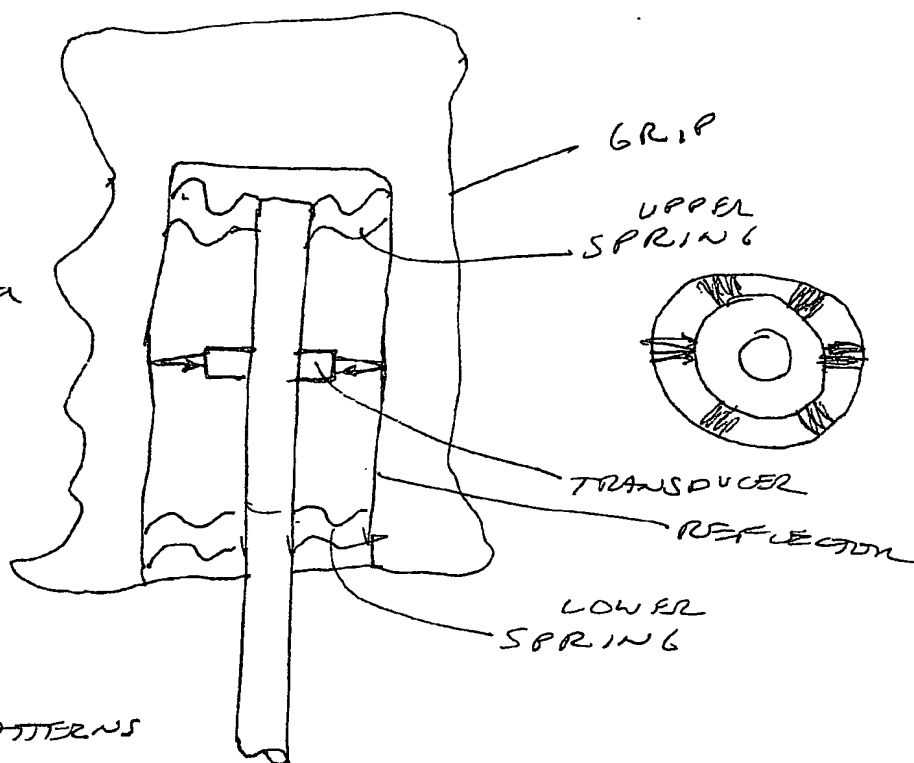






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FIG 56a



ALTERNATIVE  
REFLECTOR PATTERNS

FIG.  
56b

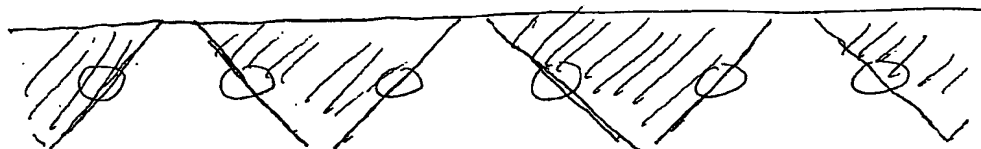
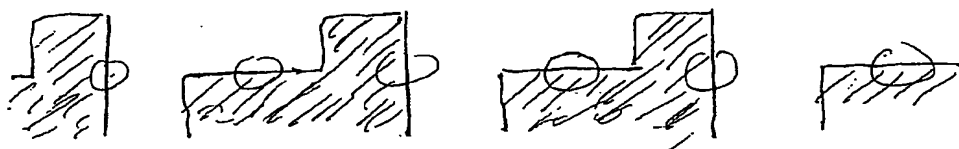
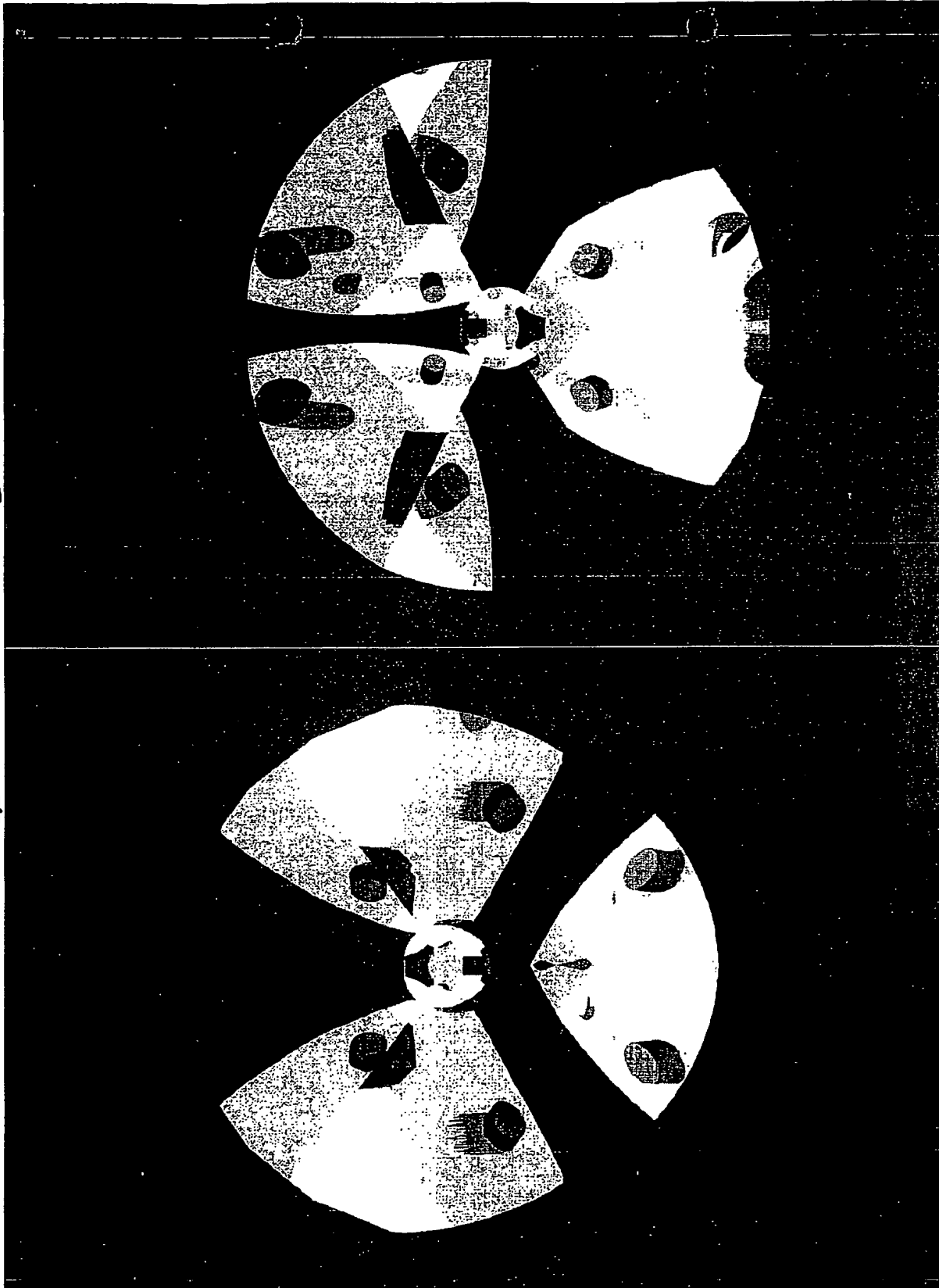


FIG  
56c





↓  
X  
Fis  
61b

Fis  
61a  
j  
x  
+

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